ASSESSMENT OF CONTAMINATION
FROM LEAKS OF HAZARDOUS MATERIALS
IN THE
SANTA CLARA VALLEY GROUNDWATER BASIN

205 J REPORT

TECHNICAL APPENDIX: CASE SUMMARIES

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I. INTRODUCTION

This Technical Appendix provides the Case Summaries of the sites with organic solvent contamination in the Santa Clara Valley subbasin. A listing of the sites for which case summaries were prepared is shown in TABLE I. As shown, these sites have been placed into one of the following three categories by the Regional Board staff.

1)On Going - sites for which the Regional Board is requiring investigation of the extent of contamination, and development and implementation of cleanup plans.

2)NA (no further action) - sites where the Regional Board has indicated that no further action beyond semi-annual monitoring is required at the present time because of the relatively low levels of pollution that were found.

3)NC (no contamination) - sites where the specific compounds investigated during the Regional Board's leak detection program were not found.

The case summaries are contained in Section II of this Appendix. They appear in alphabetical order within one of the above three categories.

In general, the following information is contained in the case summary.

-Description of the site (number of past and present tanks, solvents used, quantity of material),

-Geology of site (soil stratigraphy, hydrogeology, shallow groundwater gradient),

-Contamination of site (magnitude of soil and/or groundwater contamination, history of problem, adjacent sites),

-Case chronology - actions taken by the Regional Board and site owner/occupant,

-Current status - present stage of investigation at the site (i.e.,phase I-initial, phase II-extent, phase III-cleanup),

-References - sources of above information.

The case summaries for those sites within the cities of San Jose, Santa Clara, and Sunnyvale generally contain data through November 1984. The case summaries for those sites within the cities of Mountain View, Milpitas, Palo Alto, Cupertino, and Los Gatos generally contains data through May 1985.

TABLE 1

On Going (OG) Study Sites

Map	#	City	Facility	Address
OG	1	SV	AMD 901	901 Thompson Pl
	2	SV	Signetics 811	811 E. Arques Ave
	3	SV	AMD 915	915 DeGuigne Dr
	4	SV	MMI	1165 E. Arques Ave
	5	SC	NSC	2900 Semiconductor Dr
	6	MV	Fairchild	464 Ellis St
	7	MV	Intel MV	365 E. Middlefield Rd
	8	MV	Raytheon	350 Ellis St
	9	MV	Siltec	405 National Ave
	10	SJ	Fairchild	101 Bernal Rd
	11	SJ	IBM Cottle	5600 Cottle Rd
	12	SV	UTC	1050 E. Arques Ave
	13	SV	Signetics 740	740 Kifer Rd
	14	SV	Signetics 860	860 Kifer Rd
	15	SC	Memorex	1200 Memorex Dr
	16	SC	Intel Mag	2880 Northwestern Pkwy
	17	SC	Intel SCIII	3000 Oakmead Village Dr
	18	SC	Dysan 5440	5440 Patrick Henry Dr
	19	SC	Dysan 5200	5200 Patrick Henry Dr
	* 20	SJ	SCCT	2240 S. 7th St
	21	MP	Jones Chemical	985 Montague Expy
	22	SC	MMI	2175 Mission College Blvd
	23	SC	Fairchild	Alfred St
	24	PA	HP 1501	1501 Page Mill Rd
	25	PA	HP 640	640 Page Mill Rd
	26	PA	HP Deer Cr	3500 Deer Creek Rd
	27	SV	Westinghouse	401 E. Hendy Ave
	28	MV	Teledyne	1300 Terra Bella Ave
	29	MV	NEC	501 Ellis St
	30	SV	Circo	940 Hamlin Ct
	* 31	SV	Signetics	305 Mathilda Ave
	* 33	SC	Signetics	3600 Tannery Way
	35	SC	Safety-Kleen	3461 Woodward Ave
	36	SC	Monsanto	2710 Lafayette St
	38	SV	Verbatim	360 N. Pastoria Ave
	39	CU	Tandem (Four Phase)	19333 Vallco Pkwy
	40	PA	Stanford Cleaners	2875 El Camino Real
	41	SJ	Van Waters	2256 Junction Ave.
	42	PA	HP 395	395 Page Mill Rd
	43	SC	Precision Mono	1500 Space Park Dr
	44	MP	Great Western	945 Ames Ave
	45	CU	Siemens	19000 Homestead Rd
	46	SV	InPrint	968 Stewart Dr
	47	SV	Data General	433 N. Mathilda Ave
	48	MP	Pierce & Stevens	805 Sinclair Frontage Rd
	+ 49	SC	Synertek	3050 Coronado Blvd
	+ 50	SC	Synertek	3001 Stender Way

TABLE 1 OG con't

Map	#	City	Facility	Address
OG	51	SC	Tech Coatings	1000 Walsh Ave
	53	SC	AMI	3800 Homestead Rd
	54	SV	Intersil	1276 Hammerwood Ave
	55	SV	Xidex	305 Soquel Way
	56	SV	Zymos	477 N. Mathilda Ave
	57	SV	TRW	825 Stewart Dr
	58	SV	Exar-Integrated	750 Palomar Ave
	61	SJ	Magnex	6850 Santa Teresa Blvd
	62	MV	Moffett NAS	Moffett Field NAS
	63	SC	Spectra Physics	2905 Stender Way
	66	LG	Becton-Dickinson	14300 Winchester Blvd
	67	MP	Ford	1100 S. Main St
	68	SJ	Solvent Service	1021 Berryessa Rd
	69	SV	Precision Media	1262 N. Lawrence Sta Rd
	70	SV	KTI	1120 Sonora Ave
	71	SC	Pac Nurs Pots	1015 Martin Ave
	72	CU	HP	1100 Wolfe Rd
	75	SV	Micrel (Adv LSI)	639 N. Pastoria Ave
	76	MV	HP	333 Logue Ave
	83	CU	Timex	20650 Valley Green Dr
	84	SJ	Lorentz	1515 S. 10th St
	85	SC	Applied Materials	3050 Bowers Ave
	86	SV	Ampex	728 San Aleso Ave
	87	SV	HP	974 E. Arques Ave
	88	SC	Mag Peripherals	3333 Scott Blvd
	90	SC	Avantek	3175 Bowers Ave
	* 92	SV	Signetics	730 Evelyn Ave
	+ 93	SV	Signetics	897 Stewart Dr
	+ 94	SV	Signetics	848 Stewart Dr
	+ 95	SV	Signetics	830 Stewart Dr
	- 96	SJ	UTC (Coyote Ctr)	Sta.0706, PO Box 358, SV
	97	PA	Aydin	3180 Hanover St
	98	PA	Dura-Bond	3201 Ash St
	99	PA	Fairchild	4001 Miranda Ave

Legend:

* = Insufficient information to document facility status
+ = Synertek: 2 sites adjacent, 1 ranking
Signetics: 3 sites adjacent, included in 811 ranking
- = Site located outside study area

TABLE 1

No Further Action (NA) Study Sites

Map		#	City	Facility	Address
NA		2	SV	Applied Tec	645 Almanor Ave
		3	SJ	Qume	2350 Qume Dr
		4	SJ	Burke	2049 Senter Rd
		5	SJ	IMP	2830 N. 1st St
		6	SC	Sperry	3300 Scott Blvd
	*	7	SJ	Shell Oil	2165 O'Toole Ave
		8	SJ	Economics Lab	640 Lenfest Rd
		9	SV	Amdahl	1250 E. Arques Ave
		11	PA	Beckman	1117 California Ave
		12	SV	Bell Industrie	1161 N. Fairoaks Ave
		13	CU	Zilog Bridge	10440 Bubb Rd
	*	14	SV	Memotronics	1058 W. Evelyn Ave
		15	SJ	SafeWay Chemical	909 Stockton Ave
		16	CU	Zilog Inc	10460 Bubb Rd
		17	SC	Container Corp	2500 De La Cruz Blvd
		18	CU	Kaiser Aluminum	23333 Stevens Creek Blvd
		19	SJ	U.S. Cellulose	520 Parrot St
		21	PA	Watkins Johnson	3333 Hillview Ave
		22	SC	Dysan 5301	5301 Patrick Henry Dr
		23	MP	LSI Logic	1601 McCarthy Blvd
		25	SJ	HP	350 W. Trimble Ave
		26	MP	Harris Microwave	1530 McCarthy Blvd
		27	SJ	DAP	530 Marburg Way
		28	SC	Scientific Gas	3395 De La Cruz Blvd

Legend:
- * = Insufficient information to document facility status

TABLE 1

No Contamination (NC) Study Sites

Map	#	City	Facility	Address
NC	1	CU	Intersil	10910 N. Tantau Ave
	2	SC	Owens Corning	960 Central Expy
	* 4	SC	HP	5301 Stevens Creek Blvd
	5	CA	Hi Line Paint	500 Salmare Ave
	* 8	SV	Micromask	695 Vaqueros Ave
	9	SC	Tandy	1600 Memorex Dr
	* 11	SJ	K & H Finishing	2302 Trade Zone Blvd
	13	SJ	IBM S. 10th	2159 S. 10th St
	* 14	SJ	Sealex	582 Stockton Ave
	16	SC	STC Computer	3450 Central Expy
	23	SV	Toshiba	1220 Midas Way
	26	MP	Sierra Chemical	1001 Yosemite Dr
	27	SJ	San Jose Graphics	696 Trimble Rd

Legend:

* = Insufficient information to document facility status

II. CASE SUMMARIES

ON GOING (OG)

Advanced Micro Devices, Inc.
915 DeGuigne, Sunnyvale

Site #: OG 1
File Name:AMD915

Facility: 1 bldg
Date Reviewed: 6-27-84;12/84

Reviewer: LK

A. Description of Site

Bldg 915 constructed 1973, occupied by AMD since 1974; operations on site include semiconductor manufacturing, offices, and support systems; previous use of site was farming (row crops).

Tanks currently in use:
7 underground vaulted waste storage tanks ranging 1500-3000 gal capacities, installed 1976-82
3 underground non-vaulted waste storage tanks ranging 1500-2000 gal capacities, installed 1973 and 1980
8 underground vaulted acid neutralization tanks, 1500-4700 gal capacity; installed 1977, 1980; upgraded 1982.
Open trench sloped to system.

Chemicals used on site currently: 1,1,1-TCA, Xylene, Acetone, N-butyl acetate, Isopropyl alcohol (IPA), petroleum naptha, Freon isomers, 712-D Photoresist stripper (composition not specified), Stripping solution A-30 (composition not specified).

Acids used on site: hydrofluoric, hydrochloric, nitric, sulfuric, acetic, phosphoric, and sodium hydroxide.

AMD stopped using TCE in 1979.

Tanks removed:
7/81 Leak discovered in storage tank for 712-D photoresist stripper. A second tank used to store waste solvents was intact but proximity to leaking tank required its removal. These 2 underground waste storage tanks, installed 1976, were removed 6/82 with 570 cu yds contaminated soil.

Chemicals stored: Acetone, Xylene, N-butyl acetate, Isopropyl alcohol (IPA), and 712-D Photoresist stripper (composition not specified).

3 underground non-vaulted acid neutralization tanks, installed 1973, pulled from service 1981
Tank and 5500 cu yards soil removed 1/83.

Acids used: hydrofluoric, hydrochloric, nitric, sulfuric, acetic, phosphoric; and ammonia.

AMD part of area-wide investigation with Signetics and TRW.

Attachments: #1 - Site Location Map
#2 - Facility Map
#3 - Facility Questionnaire/Chemicals 31 pgs

B. Geology

See AMD 901/901 summary.

GW monitoring wells 1-5 not logged when installed.
Boring logs for 40 S,D and 41 S,D to be submitted.

Soil Classification per Risk Assessment Question # 11.

Attachments: #4 - Boring Logs, 20 pgs

Hydrogeology

See AMD 901/902 summary for all other info except:

28 GW monitoring wells on this site; 4 aquifers defined:
A = 16 wells
B= 8 wells
C = 4 wells
D = 0

Shallowest GW = 5.8 ft at 5-DDD.

Wells 5 S, D, DD, DDD and 33 D were destroyed at time of excavation of contaminated soil 12/82-1/83.

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected in GW = >10 soil = 8

Major contamination per aquifer (ppb):

A =	TCE	4,800	at 9-S
	1,2,4-Trichlorobenzene	16,000	at 5-S
	Freon-113	2,600	at 7-S and 8-S
B =	TCE	7,700	at 5-D
	1,2,4-Trichlorobenzene	2,400	at 5-D
	Freon-113	10,000	at 5-D
C =	No data located		
D =	No data located		

Heaviest GW contamination around # 5.

Engineering Science (ES) Plume maps for A and B Aquifers do not include contamination at 915; site specific plumes not located.

6 Extraction wells placed N of bldg. System includes dual step cleanup of GW - air strip to remove volatiles and carbon adsorption to remove non-volatiles.

Heaviest soil contamination (ppb):

1,2,4-Trichlorobenzene	60,000	at #34,	depth 12 ft
other isomers Trichlorobenzene	36,000	at #34,	depth 12 ft
TCE	1,500	at #40,	depth 26 ft
Freon-113	550	at 5-DDD,	depth 21 ft

2 1400 gal underground non-vaulted waste storage tanks removed 6/82

3 acid neutralization tanks and 5,500 cu yards soil removed 1/83

1 200 gal acetone tank replaced with larger (1000 gal) unit; tank intact.

Attachments:
- See 901/902 Summary for ES Plume Maps and RWQCB Plume Maps (Attachments #8,9)

#5 - GW/Soil Data, 10 pgs

#6 - AMD Correspondence re: Tanks removed

D. Case Chronology

7/81	Leak in 712-D Photoresist tank discovered
2/82	GW contamination detected at well 5-S.
6/82	2 underground non-vaulted waste storage tanks removed
8/82	Facility Questionnaire completed for Leak Detection Program.
10/82	underground Acetone tank replaced
1/83	3 acid neutralization tanks and 5,500 cu yds soil removed
-	Subsurface Investigation by ES GW and soil contamination Original report not located, date unknown
5/84	GW Plume migrating N off property into residential area.
6/84	CAO issued to AMD with Signetics and TRW for Plume containment and clean-up
11/84	GW Extraction system operating with 6 wells N of bldg

E. Current Status

ES conducting investigation for AMD; 915 individual report to be submitted.
GW monitoring schedule:

F. References

Original ES report not located.

1. ES report for AMD 901/902
2. Risk Assessment worksheet of wells and chemicals, 3 pgs
3. Risk Assessment ES site contamination maps, 4 pgs

Facility Questionnaire (Attachment #3).

4. AMD response to RA Summary

Signetics
811 E. Arques, Sunnyvale 94088

Site #: OG 2
File Name: S811

Facility: 1 bldg
Date Reviewed: 6/22/84
Reviewer: LK

A. Description of Site

Signetics "Contiguous sites" refer to bldgs 811 E. Arques, and 440 Wolfe Rd, 815/830/848 Stewart Dr.
Signetics responsible for Westinghouse property (Sunnyvale H.S.) and included in this 811 file.

897 Stewart and 950 DeGuigne in Signetics Total file.
"Project area" refers to Signetics, AMD, TRW in this area.

Facility Questionnaire 815 = no underground tanks; bldg closed 1982; never used by Signetics to store/process hazardous wastes.

Facility Questionnaire 830 = blank; refers to 811.

Facility Questionnaire 848 = 1 750 gal underground wastewater neutralization unit; flush with grade 6 ft deep; drains from bldg to sewer. Never used by Signetics; predates Signetics occupancy 1975.

811 obtained from Cushman Corp. in 1977; served as maintainence storage bldg.
Converted to metal plating operation (date unknown) til 11/80.
Fabrication facility on site over 10 yrs; closed 1/84.

Facility Map shows Research & Development bldg, Tank Farms E and W, DI Plants N and W, Underground Waste Treatment unit, Toxic Storage unit.

Tank farms info not located.

Tank removed:
1 underground waste solvent storage tank, installed 1965-73.
Held mixed solvent waste - not specified.
removed 2/83.

Tanks currently used:
13 underground vaulted treatment units, capacity not given, installation date not given; for operations 9/83.
3 underground sumps; 300,000 gpd; installed 1970-1980.
1 15,000 gal fuel oil storage tank

Chemicals used/stored on site: info not located.
TCE not used by Signetics since 1978.

Attachments: #1 - Site Location Map, 2 pgs
#2 - Facility Map
#3 - Facility Questionnaires 811, 815,830,848 17pg

B. Geology

Facility underlain by interlayering sand and gravel, silt, and clay.
Channels of coarse grained sand and gravel provide preferential high permeability pathways for ground water (GW).
Geologic Cross-Section done for Project area.

Missing Boring Logs for S-21A and S-28A on 811 site, and S-42 A and B on 848 site.

Soil Classification per Risk Assessment Question # 11.

Attachments: #4 - Geologic Cross-Section, 3 pgs
(from AMD 5/84 report)
#5 - Boring Logs for 811, 28 pgs
#6 - Boring Logs for 815, 8 pgs
#7 - Boring Logs for 830, 6 pgs
#8 - Boring Logs for Westinghouse, 13 pgs

Hydrogeology

57 GW wells total. 4 Aquifers defined:
- A = 5-19 ft, continuous — 32 wells
- B = 18-47 ft, lenticular and discontinuous — 25 wells
- C = 86-93 ft, — 1 well
- D = regionally used GW aquifer 200-900 ft; not penetrated; SCCWD info indicates extensive aquiclude at 100 ft.

Shallowest GW = 5.8 ft at S-5A (815)
GW flow direction = A aquifer NW, B aquifer N
GW gradient = .005 ft/ft.

Major high permeability zone originates at 811 and 440, extending downgradient across Westinghouse property.
Regional data indicates 3C may be intercepting sands near base of shallow zone.
Water table depressed by 2 dewatering systems - one at bldg 440, and one east side of 811.
Leakance observed on well nest S-48 (815) suggesting A and B aquifers interconnect.

Attachments: #9 - Hydrogeologic Information, 8 pgs

C. Contamination

See Risk Assessment Chemical Properties Question #1,2,3,4.

Total chemicals detected in GW = >10 soil = >10

Leaks detected on site early 1982; sources:

1. east side of 811 - contaminated soil and tank removed, date not clear
2. west side of 811 - solvent tank and soil removed, date given 2/82.
3. acid neutralization tank N 811 may be possible source of GW contamination; Well 70-A TCE concentrations continuously high.

Major GW contamination pattern:

aquifer	bldg	chemical	ppb	well
A	811	TCE	56,000	S-70
	815	"	77,000	S-80
	830	"	10,000	S-83
	Westinghouse	"	14,000	S-68
	811	TCA	34,000	S-2 destroyed
	815	"	89	S-48
	830	"	350	S-6
	Westinghouse	"	400	S-68
B	811	TCE	2,800	S-24
	815	"	13,300	S-48
	830	"	5,200	S-82
	Westinghouse	"	92,000	S-75
	811	TCA	1,300	S-3
	815	"	460	S-48
	830	"	42	S-27
	Westinghouse	"	100	S-77

C - no data
D - not penetrated

EMCON report 2/84 states "plume shape demonstrates clear separation of contamination" between Signetic 811, AMD and TRW.

ES report 5/84 for AMD states separation and includes plume map.

However, RWQCB Plume maps show extent of contamination throughout with no separation.

Dewatering operations at 440 Wolfe for 811.
Extraction well 70-A installed 4/83 to control GW infiltration to subsurface WWT area.

Major soil contamination - chemicals similar to those detected in GW, concentrations higher. (See Risk Assessment).

Appear to be 3 areas contaminated but data, dates not clear:
- 1 = Tank Pit excavation by EMCON
  location not clear; date = 6/82
- 2 = solvent tank west side 811 removed 2/82
- 3 = planned R&D removal 6/84

Attachments: #10 - Sources On-Site Contamination per EMCON, Signetics, RWQCB 16 pgs
#11 - RWQCB Plume Map, TCE A and B Aquifer
#12 - EMCON Report re: Plume, Contaminants 3 pgs
#13 - GW Data, 14 pgs
#14 - Soil Data, 15 pgs

D. Case Chronology

3/82	GW contamination detected on site
6/82	Tank and soil removed (not clear which tank)
4/83	NPDES permit given
4/83	Extraction well 70-A installed N bldg 811
6/83	Facility Questionnaire completed for Leak Detection Program
1/84	Fab 10 closed
2/84	EMCON report Conflicting reports with AMD, TRW re: GW flow, source and spread of contamination.
5/84	Plume migrating into residential area
6/84	Demolition of R&D unit bldg 811
6/84	CAO issued to Signetics with AMD, TRW for plume containment and clean-up

Attachment: #15 - EMCON Chronology, 3 pgs

E. Current Status

Monthly GW sampling

Attachment: #16 - Signetics Correspondence re: Monitoring 3 pg
#17 - Signetics Correspondence re: Site 4 pgs

F. References

1. EMCON report 2/84
2. Signetics Monitoring Wells
3. Risk Assessment chemical tally sheets.
4. Facility Questionnaires (Attachment #3).

No other reports located though data from 1982.

Signetics 440/450 Wolfe Rd, Sunnyvale	Not a Separate Case Site #: OG 2 (S811)
Facility: 2 bldgs Date Reviewed: 6-22-84	File Name: Sig440W Reviewer: LK

A. Description of Site

Bldg 450 adjoins 440 West side and considered as unit "440 W". 440W not a separate case; included as part of Signetics 811 file.

Signetics occupancy since 1974; operations on site not specified but plume maps note 440 = Research and Development, 450 = tank farm.

No info re: previous use of site;
500 gal old neutralization sump NW side of facility predates Signetics occupancy and never used by Signetics.

1 500 gal underground vaulted waste solvent tank, installed '82
5 underground vaulted waste storage tanks for pretreatment neutralization; capacity not specified; installed 1981/82
7 underground vaulted primary neutralization tanks, installed 1982
4 underground non-vaulted Fuel oil storage tanks

Dewatering system installed 1979, incorporates subsurface gravel drains 20 ft below facility; drain to permanent sump NW corner.

Chemicals on site: Sodium hydroxide, Hydrosulfuric acid, Hydrogen fluoride, Buffer oxide etch
Waste solvent tank contents not specified.

Attachments: #1 - Site Location Map, 2 pgs
#2 - Facility Map
#3 - Facility Questionnaire, 11 pgs
#4 - Site Information, 3 pgs

B. Geology

Investigations by United Soil Engineering, Inc (USE) and EMCON Associates; original reports for site stratigraphy not located.

Missing Boring Logs S-25A, S-26A, S-65 A and B.

Soil Classification per Risk Assessment Question # 11, 12, 13.

Attachments: #5 - Geologic Cross Section for Signetics 811 Area-wide Investigation, 4 pgs
#6 - Boring Logs, 8 pgs

Hydrogeology

No specific info for this site; info per EMCON 2/84 report for Signetics 811 Areawide Investigation.

8 GW wells total. 2 Aquifers defined:
A = 9-25 ft
B = 25-40 ft
Shallowest GW = 9 ft at S-4, S-25, S-43
GW flow direction for Signetics area-wide =
A aquifer = NW, influenced by decontamination operations at 811
B aquifer = N
GW gradient for A and B is .005 ft/ft

C. Contamination

See Risk Assessment Chemical Properties Question # 1,2,3,4.

Total chemicals detected in GW = 9 soil = 1

Major contaminant both A and B aquifer (ppb):
TCE 64,000 at S-43 A
6,600 at S-65 B
Contaminated region primarily East side of facility;
Low TCE detection West perimeter.

Soil contamination = Phenol 21,000 ppb at S-4 10 ft per "ES" lab 3/10/82
Data by EMCON not located.
Not clear if soil analyzed for all chemicals and only Phenol detected, or others not examined.

Attachments:
#7 - RWQCB Plume Map, TCE A and B Aquifer
#8 - GW Data for Monitoring Wells, Including Soil Notation 6 pgs
#9 - GW Inlet Data, 2 pgs
#10 - GW Summary Data per EMCON, 3 pgs

D. Case Chronology

1/82	GW contamination detected in dewatering system on site
3/82	Phase I Subsurface Investigation by USE, EMCON Findings - soil and GW contamination Original reports not located
4/82	Activated carbon system on drain effluent to Flood Control Channel
2/83	2 additional carbon towers installed; dewatering site for Facility 811
6/83	Facility Questionnaire completed
6/84	CAO issued by RWQCB to Signetics Areawide Investigation re: Plume ID and Containment

E. Current Status

9/83 GW well data: TCE = 23,000 at S-25A and 44,000 at S-43A (ppb), area in path of 811 plume

11/83 GW Effluent: 1,1,1-TCA 170 ppb

Monthly GW sampling S-25A and B, S-43A

Attachments: #11 - Signetics Correspondence re: Monitoring, 3 pgs
#12 - GW Data, Wells and Effluent 3 pgs

F. References

Original EMCON and USE reports not located.
Facility Questionnaire (Attachment #3).

Signetics Total Facilities File Name: SigTotal

Date Reviewed: 6-22-84 Reviewer: LK

6/20/83 Facility Questionnaires completed for all sites.

Attachment #1 - Signetics Site Map
#2 - Signetics Correspondence re: Monitoring, 3 pgs
#3 - GW Analysis and Well ID, 4 pgs

A. Individual files; Facility Questionnaires attached this file:
860 Kifer Site #: OG 14
740 Kifer Site #: OG 13
811 E.Arques, includes 440 Wolfe, 815/830/848 Stewart Dr.
Note: 440 Wolfe separate folder but 811 case file
811 Site #: OG 2
830 Site #: OG 95 848 Site #: OG 94

B. No underground tanks

175 San Gabriel, Sunnyvale 94086
Facility closed 1982; never used by Signetics to store or process hazardous waste.

1134 Aster, Sunnyvale 94086
Facility closed 1982.

111A Uranium Way, Sunnyvale 94088
Warehouse storage; only solid waste generated on site; due to be closed Fall '84.

C. Above ground units

290 Wolfe Rd, Sunnyvale 94088
1 above ground Poly Pro 25 gpm portable wastewater pretreatment system, installed 1980.

1380 Kifer Rd, Sunnyvale 94088
1 above ground Poly Pro 25 gpm portable primary neutralization system, installed 1980/81.

2251 Lawson Lane, Santa Clara
Signetics leasee of bldg since 1983; to vacate property 1/85.
1 above ground 10 gpm wastewater treatment unit;
removed 9/84
1 10,000 gal underground fuel oil storage tank
1 small test facility on site, uses <1 liter fuming nitric/yr

D. Site-by-Site Monitoring Program, Map Site

Annual Monitoring

1. 305 Mathilda, Sunnyvale 94088 Site #: OG 31
Signetics vacated bldg (per Review note 11/84)
No underground units.
2 GW monitoring wells on site - S29, S30
one Aquifer tested
GW flow direction = NE; Shallowest GW = 24 ft, S30
GW analysis 5/82 = all chemicals <1 ppb

Attachments #4: Site Map, Boring Logs, GW Data 4 pgs

Quarterly Monitoring

1. 730 Evelyn, Sunnyvale 94088 Site #: OG 92
Bldg to be vacated first quarter 1985.
1 4500 gal underground vaulted waste storage tank; installed 1979, replaced 1983. Tank bottom 11 ft below grade. Gravity fed; Removed by 11/84
1 1000 gal underground waste solvent tank; installed 1980; replaced in vault 11/84; Tank bottom 10 ft below grade.
6 treatment units.
Chemicals stored: Hydrogen fluoride, Ammonium fluoride, BOE

2 GW monitoring wells on site - S20, S22
two Aquifers tested, A and B
GW flow direction = NE; Shallowest GW = 24 ft, S-22A
Quarterly GW monitoring S-22A only.

4/82 GW analysis on S-20A only = <1 ppb
9/82 Leak in HF tank detected
11/83 GW analysis on S-22A only = TCE 1500 ppb, PCE 2 ppb
(see Summary Report, Attachment #3)
3/85 Bldg to be vacated first quarter 1985

Attachments: #5 - RWQCB Memo re: Leak HF Tank
#6 - Site Map, Boring Logs, GW Data 6 pgs

2. 897 Stewart Ave, Sunnyvale 94088 Site #: OG 93
No underground units; Signetics no longer leases site; bldg subleased.
500 gal abandoned wastewater treatment unit on site; predates Signetics occupancy 1979; Tank bottom 8 ft below grade.

2 GW monitoring wells on site - S38, S39; A and B aquifers.
Boring Logs and Site Map not located.
11/83 GW analysis = 1,1,1-TCA 180 ppb, TCE 57 ppb

(see Attachment #3)

3. 950 DeGuigne, Sunnyvale
No underground tanks, facility subleased to Lockheed 5/82.

2 GW monitoring wells on site - S40, S41; A and B aquifer.
Boring Logs and Site Map not located.

11/83 GW analysis = 1,1,1-TCA 21 ppb
(see Attachment #3).

4. 3625 Peterson Way (Tannery Way), Santa Clara Site #: OG 32
No underground units.
Site closed by Signetics; subleased to AMD.

2 GW monitoring wells on site - S44, S45; A and B aquifer
GW flow direction = NE; Shallowest GW = 4.5 ft A,B at S45.

5/82 GW analysis = TCE A and B aquifer, both wells
Freon 113 4 ppb at S45 A aquifer.
2/83 GW analysis = Freon 113 1,300 ppb at S45A
Dichloromethane 75 ppb at S44A
11/83 GW analysis = only A aquifer sampled; Freon not analyzed.
TCE 0.4 ppb (see Attachment #3).

Attachments: #7 - Site Map A and B Aquifer, Boring Logs, GW Data,
EMCON Correspondence 7 pgs.

5. 3600 Peterson Way (Tannery Way), Santa Clara Site #: OG 33
5 underground vaulted wastewater treatment units, 120,000 gpd;
installed 1980; Cyanide destruction system relined 1982.
NPDES permit for RO Reject Water to Calabasses Creek.

1 GW monitoring well on site - S46, A and B aquifer
GW flow direction = NE; Shallowest GW = 5 ft, B aquifer.

9/82 GW analysis = all chemicals <1 ppb.

Not analyzed 11/83; not included in Attachment #3 Report.

Attachment #8 - Site Map, Boring Log, GW Data 3 pgs.

Advanced Micro Devices, Inc.
901/902 Thompson Place, Sunnyvale

Site #: OG 3
File Name: AMD

Facility: 2 bldgs
Date Reviewed: 6-27-84;12/84

Reviewer: LK

A. Description of Site

Bldg 901 constructed 1968, occupied 1969; operations on site are semiconductor processing (manufacture of integrated circuits) Previous use of site was farming (row crops).
Bldg 902 constructed 1971, occupied 1972; Offices and operations on site.

3 1000 gal underground vaulted acid neutralization tanks N bldg 901, installed 1982; smaller units in place 1969, removed '81
3 1000 gal underground vaulted acid neutralization tanks S bldg 902, installed 1982; smaller units in place 1971, remoced '81
1 1000 gal vaulted storage tank for non-chlorinated waste solvents, installed 2/83 at 901

Chemicals on sites: 1,1,1-TCA, acetone, N-butyl acetate, Xylene, IPA. Acids in tanks - hydrochloric, nitric, sulfuric, acetic, phosphoric, sodium hydroxide, ammonia.
Other compounds also used - i.e., KTI Photoresist, Burmar Stripper (complete list attached).

AMD stopped using TCE in 1979.

AMD part of area-wide investigation with Signetics and TRW.

Attachments: #1 - Site Location Map
#2 - Facility Location Map, 2 pgs
#3 - Facility Questionnaire, 8 pgs
#4 - Facility Information, Including List of Chemicals OnSite, 9 pgs

B. Geology

Project area underlain by complex interlaying of clay, silts, sand and gravel which are generally lenticular in nature.
Geologic cross-section for Project area (AMD-Signetics-TRW) done.

8/81 two boring logs by John V. Lowney & Asso completed prior to installation of acid neutralization system vaults.

Soil Classification per Risk Assessment Question # 11.

Attachments: #5 - Geologic Cross-Section, 3 pgs
#6 - Boring Logs, 19 pgs

Hydrogeology

20 GW wells on site. Four aquifers defined:
A = 9-14 ft; continuous, unconfined;
B = 25-40 ft; lenticular, semi-confined to confined;
C = 45-65 ft; confined, or semiconfined and leaky;
D = 85 ft; confined, or semiconfined and leaky;

Shallowest GW = 9 ft at 23-S.
GW flow = North A and B aquifer; not specified for C aquifer.
Gradient = .005 ft/ft A and B.
conductivity A = 65-300gpd/ft squared, B = 10-240gpd/ft sq.
velocity range A = 65-200 ft/yr B = 50-200 ft/yr

Geologic cross section shows preferential pathway along Eastern and Western area where sand 5-12 ft vs clay rich central area. A high permeability zones exists near 901 extending N-NW towards Stewart Dr, changing direction to N-NE, and terminating at 915. Storm drains on Stewart Dr may act as "sink".

Leakage noted in A,B,and C aquifers at following wells:
25-S,D 27-D, 28-S, 29-D, 30-DD

Attachments: #7 - Hydrogeologic Information, 6 pgs

C. Contamination

See Risk Assessment Chemical Properties Question #1,2,3,4.

Total chemicals detected in GW = >10 soil = 5

Major contaminants per aquifer (ppb):

A =	TCE	110,000 at 28-S
	Trans-1,2-dichloroethylene	70,000 at 28-S
	Freon 113	2,200 at 21-S
B =	TCE	46,000 at 16-D
	Trans-1,2-dichloroethylene	27,000 at 23-D
	Xylene	3,800 at 28-D
C =	TCE	2,200 at 30-DD
D =	no data	

Heaviest GW contamination N 901 at 28-S, near acid tank. Perimeter of clean wells (TCE <.5) upgradient at 15-S, and east at 14-S.

Engineering Science report 5/84 states TCE concentrations exceeding 100 ppb identified only in upper two sands, but GW data shows TCE 2,200 at 30-DD (third aquifer).

ES plume maps not inclusive of contamination on AMD site;
wells contaminated at 901 = 16,21,22,23
wells contaminated at 902 = 25,26,27,29.

Heaviest soil contamination also in vicinity of 901 acid tank:
TCE 10,000 ppb at #8
12/83 175 cu yds contaminated soil and old 901 concrete neutralization tank removed.

Attachments: #8 - Plume Maps by ES, 2 pgs
#9 - Plume Map by RWQCB
#10 - GW/Soil Data, 10 pgs

D. Case Chronology

4/82 Historical TCE data notes GW contamination at 16-S
8/82 Facility Questionnaire completed for Leak Detection Program
- Subsurface Investigations done = soil and GW contamination
Original reports and dates not located for
Engineering Science
Woodward Clyde Consultants
"ARI"
3/83 GW extraction system installed for A and B aquifers
12/83 Tank and soil removed
5/84 TCE plume in Project area migrating into residential area
6/84 CAO issued to AMD with Signetics and TRW for plume containment and clean-up

Attachment: #11 - Historical TCE Data, 2 pgs

E. Current Status

6/84 ES conducting investigation for AMD.
Original 901/902 acid neutralization tanks excavated and removed
GW monitoring schedule:

F. References

Original ESI, WCC, ARI reports not located.

1. ES report 5/84
2. Risk Assessment worksheet of wells and chemicals, 4 pgs
Facility Questionnaire (Attachment #3).
3. AMD response to RWQCB Summary.

MONOLITHIC MEMORIES, INC.
1165 E. Arques Ave., Sunnyvale

Site #: OG 4
File Name: B:MMI-SV

Reviewed 3/84;1/23/85

Reviewer:LAP/MCT

A. Description of Site

This facility has been operating since 1969 (1). No information in file on former occupants or use. Summary of building operations (c):

Building 1 (1165 E. Arques Ave.) - Office, Manufacturing (Wafer Fabrication), Equipment Maintenance.
Building 2 ((1175 E. Arques Ave.) - Office, Manufacturing (Wafer Fabrication).
Building 3 (1160 Kern Ave.) - Office, Finish Manufacturing (Wafer Sort, Assembly, Mark-and-Pack) Test, Shipping, Chemical Storage.
Building 3A (1105 Kern Ave.) - Warehouse (Nonhazardous - desks, tables, etc.).
Building 6 (1135 E. Arques Ave.) - Office, Receiving, Building Maintenance.

Current Underground Tank Inventory (c):

	Vaulted	New
1 Waste Solvent Tank (4 chambers)	Y	X
1 Waste Acid Fluoride Tank	Y	X
3 Neutralization Tanks	Y	X
1 Diesel Fuel Tank	N	

See Attachments 2 & 3 for historical tank information.

See Attachment #3 for solvents stored on site and general history of activities on site.

Attachments:
#1 Site Maps
#2 Facilities Questionnaire
#3 Chronology of solvent storage and site activities.

B. Geology

Site underlain by a series of interlayered clay and alluvial sand deposits (1).

13 Risk Science International (RSI)/Emcon 1982 borings; deepest 95 ft. (c).
13 Woodward-Clyde Consultants (WCC) 1984 borings; deepest 61.5 ft. (c).

Soil classification per Risk Assessment Question #11.

Attachments:
#4 RSI/Emcon Boring Logs
#5 WCC Boring Logs
#6 RSI Geologic Cross Section

Hydrogeology

Three aquifer layers cited (2) but MMI says aquifers not well defined and that conductive zones are more likely channels than layers (c). "A" zone 10-30 ft., "B" zone 36-45 ft., "C" zone 80-95 ft.

Shallowest groundwater (GW) at 7 ft. GW gradient is 1%. Flow direction is approximately NNE. The cone of depression cited in earlier reports at the Lawrence/Central interchange does not exist (c).

Coefficient of transmissivity approximately 250 gpd per foot, coefficient of storativity approximately 0.006 based on pump test findings (2). MMI says the hydrology study is meaningless. Well M-10A is a very poor producer. All the wells WCC installed produce better. Either MMI had bad luck choosing a site for the well or the well was improperly installed. Data from the pump test predicted a flow rate into a nearby excavation (nearest point 50 ft. to the west) 1/5 actual (c).

See Attachment #8 for information on nearby wells.

Attachments: #7 WCC GW level map
#8 Information on nearby wells.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: PCE, Isopropanol, Acetone, Toluene, Ethylbenzene, and Benzene detected in both soil and GW, Phenol detected in GW only.

TCE detected in GW but "TCE has not been used at the facility for at least 4 years and then it was only used in very small quantities (i.e. less than 5 gal/mo.)." (1). PCE is a constituent of a commercial product, J-100, used by MMI and previously stored in the older solvent tank (3).

GW contamination - 10+ chemicals.	Major contaminants:
Xylene	104 ppm
Ethylbenzene	35 ppm

Soil contamination - 8 chemicals.	Major contaminants:
Xylene	630 ppm
Ethylbenzene	160 ppm

Sources of contamination thought to be both on-site (near older waste solvent tank) and off-site (1). The primary source of leakage of waste solvents on-site has been identified to be from piping outside of Building 2 (3).

New lab results show contamination further off-site (see Attachment #9).

Upgradient facilities: NSC, UTC (see Attachment #1).

Attachments: #8 RSI/Emcon Lab Results
#9 WCC Lab Results
#10 RSI Plume Maps
#11 RWQCB Plume Maps

D. Case Chronology

Leak Detection Program 1982.

5/25/82	Facilities Questionnaire received by RWQCB.
6/8/82	Emcon reports to RSI with boring logs and lab results for 3 wells (M-1,2,3) showing GW contamination.
7/1/82	RWQCB receives MMI letter with preliminary results from GW testing.
8/19/82	MMI letter with preliminary information on GW testing received by RWQCB. Contamination indicated from both an on site (near older waste solvent tank) and an off site source. Proposal for further investigation also included (see Attachment #12).
9/2/82	Subsurface investigation by RSI received by RWQCB. 7 borings/MWs constructed. Results: GW contamination detected.
11/3/82	"Phase III" GW monitoring investigation by RSI completed. 2 borings/1 MW (to "B" aquifer) constructed. Results: Soil contamination detected, GW contamination in "B" aquifer detected.
11/10/82	Meeting with MMI, RWQCB, and consultants to discuss remedial action on site. Some chemicals detected in GW never used or stored on site - MMI suggests discussing data with upgradient neighbor NSC.
2/18/83	"Phase IV" GW monitoring investigation by RSI completed. Extraction well installed near neutralization tanks & pump test performed, "B" aquifer MW installed adjacent to existing well M-7, "C" aquifer MW installed near wells M-2A and M-2B (~80 ft. deep). Remedial action plan options also included in report.
7/28/83	MMI letter received by RMB notifying her of postponement of soil excavation on site pending construction of a new acid neutralization system (Attachment #13).
1/25/84	RMB receives "Initial Remedial Action Plan" by WCC on behalf of MMI.
3/5/84	RMB receives MMI request for removal of existing underground waste solvent tank.
3/19/84	RMB receives information on history of MMI facility as well as set of constuction drawings for new neutralization system.
4/2/84	RMB receives letter from MMI disclosing leak of Hydrofluoric Acid discovered 3/21/84 from pipe located inside MMI Building 1. The HF "dissolved a hole through the concrete trench bottom and proceeded into the soil. A hole approximately 2 feet in diameter and 4 feet deep was dissolved into the soil." It was estimated that 2,000-2,500 gal. of 49% HF has leaked in the previous 2 years (see Attachment #13).

7/3/84	RMB receives MMI report on sampling and analysis for pH and fluoride in GW. Results: slight depression in pH (to 6.6) and elevated fluoride (highest 21 mg/l) levels in GW.
10/1/84	City of Sunnyvale Hazardous Materials Discharge Notification issued. Acid waste discharge detected 9/26/84, RWQCB contacted same day.
10/19/84	WCC letter to Santa Clara County requesting encroachment permit for off-site MWs to be installed on West side of Lawrence Expressway.
10/25/84	JYL meeting with Tom Delfino of MMI. Agreement to install three deep soil borings to verify lithology and to install 4 additional "A" aquifer wells.
11/2/84	MMI letter received by JYL with information on nearby wells (see Attachment #8).
12/3/84	WCC letter to DOHS stating soils for disposal from site may be sent to a Class 2 disposal facility based on chemical analysis of soils.
12/19/84	RWQCB receives 205j Summary File Review from MMI (see Attachment #14).
1/16/85	Preliminary report by WCC received by JYL. 19 borings/MWs constructed - deepest 61.5 ft. Results: some GW contamination in new downgradient wells.

Attachments: #12 MMI letter 8/19/82
#13 MMI letter 4/2/84
#14 205j Summary File Review 12/17/84

Current Status (as of 1/23/85)

Ongoing Phase II. Remedial action plan has been informally approved. This approval was verbal, not written, and has not been taken to the Board.

Excavation is taking place in the parking lot before new construction can begin. Soil samples 2',8', and of removed soil are available.

Fluoride will be included with reports on organic contaminants.

F. References

1. GW Monitoring Investigation by RSI 8/82
2. "Phase IV" GW Monitoring Investigation by RSI 2/83
3. "Phase III" GW Monitoring Investigation by RSI 11/82
4. Preliminary subsurface investigation by WCC 1/85

National Semiconductor Corp. Site #: OG 5
2900 Semiconductor Dr., SC 95051 File Name: NSC

Facility: >10 Bldgs
Date Reviewed: 12/84 Reviewer:LAP/LK

A. Description of Site

No info re: previous use of site.
NSC on site since ~1968; manufactures integrated circuits/systems
Subsidiary plating facility Dyna-Craft, Inc. occupies Bldgs 1,2,3, and 9 (San Ysidro Way).

Underground storage units with dates of installation, capacities, not clearly specified by NSC. NSC letter 3/24/82 refers to "former storage tank" but location not given.
Map dated 7/2/80 identifies 8 sumps under Bldg A/Treatment Pad.

Initial monitoring wells (MWs) placed near underground tanks, pits, and sumps as follows:

MW-1	500 gal solvent waste tank,	W Bldg 19
MW-2	1000 gal solvent waste pit,	N Bldg 19
MW-3	320 gal solvent waste tank,	W Bldg 3
	400 gal acid waste sump,	"
MW-4	unit not specified,	S Bldg 3
MW-5	700 gal solvent waste tank,	E Bldg A
MW-6	1065 gal solvent waste tank,	SE Bldg A
MW-7	unit not specified,	S Bldg A
MW-8	4000 gal solvent waste tank,	E Bldg 8
MW-9	650 gal solvent waste pit,	E Bldg C
MW-10	2000 gal solvent waste tank,	S Bldg C
MW-11	4000 gal solvent waste tank,	W Bldg C

All tanks initially non-vaulted; letter 9/82 refers to 1 vaulted tank Bldg 3, 5 tanks to be vaulted; NSC response 1/85 to Risk Assessment refers to 7 tanks now vaulted.
Location/contents/capacities/# tanks not clearly stated by NSC.

Chemicals on site: 1,1,1-TCA, Xylene, Methanol, Acetone, Isopropyl alcohol (IPA), Perchlorethylene (PCE), n-Butyl acetate, Ethanol, Methyl chloroform, Freons, Methyl ethyl ketone, petroleum distillates, Methylene chloride, negative photoresist, and "about 20 proprietary solvents".

TCE not used since 1975. Composition of proprietary solvents not given.

Downgradient facilities = United Technology, Monolithic memories.
9/84 UT facility demolished; land subdivided with HP extending to W, O'Donnell Brigham office park on E.

Facility Questionnaire not completed. UIC Program Form in file.

Attachments:		
#1 - Site Location Map		
#2 - Facility Location Map		
#3 - Underground Tanks/Pits/Sumps & MWs	2 pgs	
#4 - UIC Program Form/Chemicals On Site	11 pgs	
#5 - Facility Information	9 pgs	
#6 - NSC Response to RA	6 pgs	

B. Geology

Site borings range in depth from 10.5 - 62 ft and consist of a superficial clay layer, sand and gravel bed of laterally variable lithology, low permeability clay deposit, and silty sands/gravels with minor clay interbeds.
Lithology across the site varies from sands on the W, coarse sands on the E, with a 300-600 ft wide ancestral gravel stream channel extending from Bldg 14 toward Bldg D and on to N.

Soil classification per Risk Assessment Question # 11.

Attachments:		
	#7 - Lithology Map/Soil Information	2 pgs
	#8 - Boring Logs	80 pgs
	Bldg 3 Soil Borings 7/84	8 pgs

Hydrogeology

58 GW wells. 2 aquifers identified:
A = 4-25 ft thick
shallowest GW = 6 ft at MW #34 7/83
flow direction = N-NE
gradient = .02 - .002 ft/ft
velocity = 8 - 5200 ft/yr
B = 2-10 ft thick
flow direction = N-NE
gradient = .006 ft/ft

GW flow affected by dewatering sump under Bldg D, and sump #2 under Lawrence Expressway. Correspondence by RWQCB/State Hydrologist stress aquifer characteristics impacting GW contamination, and need for EMCON/NSC to define lateral/vertical plumes.

City of Santa Clara water well # 20-02 located on site NE of Treatment Pad/Bldg A.

Attachments:		
	#9 - Hydrogeologic Information	7 pgs
	#10 - State Hydrologist Info	13 pgs

C. Contamination

See Risk Assessment Chemical Properties Question # 1,2,3,4.

Total chemicals detected: GW = >10 soil = >10

All chemicals used on site detected in GW.

A Aquifer/Sources

1. Initial GW/soil investigation 3/82 identified heaviest contamination = 1,1,1-TCA (ppb):

Bldg 3, MW-3	GW - 11,000	soil - 150,000	at 8-9.5 ft
Bldg A, MW-6	GW - 16,000	soil - 1,800	at 9.5-11
Bldg C, MW-11	GW - 13,000	soil - 300	at 9.5-11

2. GW data 4/82 = TCE 23,960 ppb at MW-15A, N edge of property.

3. GW data 7/83 = heavy contamination at MW-29, S of Bldg D: (ppb)

Acetone	340,000
Methanol	290,000
IPA	130,000

4. Soil contamination generally showed 1,1,1-TCA across site; TCE in low detection at #18-20 giving longest contamination distance of 1350 ft.

Specific major soil contamination at Bldg 3, MW-4 3/82 (ppb):

Methanol	GW - not tested	soil - 83,000,000
Xylene	GW - 26,000	soil - 2,000,000
Benzene	GW - <5	soil - 1,200,000
IPA	GW - not tested	soil - 1,000,000
Phenol	GW - not tested	soil - 450,000
n-BA	GW - not detected	soil - 450,000
1,1,1-TCA	GW - 470	soil - 1,000
TCE	GW - 95	soil - 400

Soil analysis 9/84 W and S Bldg 3 (ppb) =

Xylene	18,000,000	S
PCE	9,600	S
TCE	850	S
TCA	34,000	W

5. City of Santa Clara water well 20-02 tested 3/82 = VOCs <1 ppb

B Aquifer

6. B aquifer wells = 15B, 17B, 22B, and 41B
TCE 200 ppb detected 11/83 at 15B, N edge of property

Spills on site:

4/3/81	Bldg 3	
1/15/82	Bldg 2, Dyna-Craft Inc.	10,000 gal acid waste
3/2/82	Bldg 19 and 3	30,000 gal acid waste
12/15/82	NSC	1,500 gal acid waste
7/18/83	Bldg 2, Dyna-Craft	5 gal
8/10/83	Bldg C	3-5000 gal wastewater

Clean-up program:
Source control Extraction wells placed near Bldg 3 and C;
Barrier Extraction wells placed near Bldg 1,2, C,D,E,
Treatment pad , and Parking structure.

Downgradient facility UT contamination considered from NSC;
MMI contamination considered partly from NSC (see Attachment #10, pg 4-5).

MW-4 damaged 8/83.
MW-15A and 35 abandoned 8/84.

Attachments:	#11 - GW/Soil Data	24 pgs
	#12 - RWQCB Plume Maps	4 pgs
	#13 - Bldg 3 Soil Data	6 pgs
	#14 - Spills On Site	9 pgs
	#15 - Remedial Action Plan	3 pgs
	#16 - MWs 4, 15A, 35 Info	2 pgs

D. Case Chronology

Facility Questionnaire not completed for NSC.
Detailed chronology by RWQCB attached.

4/81 - 8/83	Spills on site (see Attachment #14)
3/82	NSC initiated Phase I subsurface investigation Findings = soil/GW contamination
10/82	Facility chronic non-compliance with NPDES permit
1/83	B aquifer contamination identified N property edge
8/84	RWQCB requires lateral/vertical plume ID on/off site

Attachments:	#17 - RWQCB Chronology	5 pgs
	#18 - NSC Chronology	
	#19 - EMCON Summary 9/84	

E. Current Status

12/84 Remedial Action Plan for A aquifer accepted
NSC to submit Monitoring Program, B aquifer Remedial Plan

Attachments:	#20 - RWQCB Correspondence re: Status	8 pgs
	#21 - NSC Correspondence	

F. References

Attachments as above.
EMCON reports

- 3/17/82
- 4/27/82
- 5/82
- 6/11/82
- 8/23/82
- 10/7/82
- 1/6/83 (2 separate reports)
- 2/15/83
- 8/3/83
- 10/18/83
- 2/84
- 9/84 (2 separate reports)

Fairchild Camera and Instrument
Mountain View Complex

Site #: OG 6
File Name:FairC

Facility: 5 Divisions
Linear - Bldg 1,2,3,4; Hybrid - Bldg 19; Bipolar - Bldg 9,20;
Materials - Bldg 18; Research & Development - Bldg 13

Date Reviewed: 3/85

Reviewer:LAP/LK

A. Description of Site

Previous use of site = agricultural.
Aerial photography from 1959 shows initial structures of Fairchild Bldgs 19, 3, and 4. Present complex existed as early as 1968.
Fairchild manufactures semiconductor wafers.

Facility Questionnaires submitted 5/82 for Linear (L), Hybrid (H) and Bipolar (BP) divisions. No Facility Questionnaire located for Materials division.
Information re: tanks, chemicals on site not detailed in Questionnaire; taken from 8/28/84 Correspondence.
Fairchild submitted information to RWQCB which it considered confidential. That information was not reviewed for this Summary.

Linear Bldg 1-3 = chemical/fab/cleaning operations;
" Bldg 4 = office space
Hybrid Bldg 19 = fab/lab cleaning operations
Bipolar Bldg 9 = chemical facility for all Fairchild Northern California plants
" Bldg 20 = chemical fab operations; administration offices
Materials Bldg 18 = plating operations; sold in 1984
R & D Bldg 13 = no underground tanks/sumps

Total of 72 historical/current tanks/sumps on site; capacities range from 60 - 20,000 gal; usage period 1962-1985; location:
Bldg 1 = 7 active, 14 not in service, 2 removed
Bldg 2 = 2 not in service
Bldg 3 = 1 active, 3 not in service
IWTP = 5 active, 1 not in service
Bldg 9 = 5 active, 4 removed
Bldg 18 = 7 active
Bldg 19 = 8 active, 10 not in service
Bldg 20 = 2 active, 1 not in service

Summary/Status of tanks:
15 raw and waste solvent storage tanks
2 active, 9 not in use, 4 removed
45 neutralization sumps
16 active, 28 not in use, 1 removed
12 other tanks/sumps
7 active, 4 not in use, 1 removed

Chemicals on site:
TCE (stopped entering Bipolar 1978, Linear before 1980)
1,1,1-TCA, PCE, Freons TF/TE, Xylene, 2-Propanol, Acetone, Phenol, n-Butyl acetate, Isopropyl alcohol, o-DCB, Methanol, cyanide;
acids = hydrochloric, nitric, sulfuric, phosphoric, acetic.

Moffett Naval Air Station to N; residential area to W; other semiconductor facilities to S and E.
Other facilities part of areawide investigation: Raytheon, NEC, Siltec, Intel.

Attachments:	#1 - Site Location Map	3 pgs
	#2 - Facility Map	
	#3 - Facility Questionnaires (L,H,BP)	20 pgs
	#4 - Tanks/Chemicals OnSite	14 pgs
	#5 - Facility Information	
	#6 - RWQCB Summary of Site	6 pgs

B. Geology

Soils in vicinity consist of medium to high plasticity silty clay to depth of ~15 ft, underlain by interbedded and discontinuous layers of silty clay, sand and gravel.
B-C aquiclude = clayey silt underlain by sand and gravel at ~190 ft. Deepest boring on site = 1C to 205 ft.

3 faults postulated near study area.

Complete Boring Logs for 1-70 A, 1-8 B, and 1 C wells located in Canonie 6/13/83 report.
Boring Log for Extraction well 71-A installed 6/84 not located.
4 foundation wells in A aquifer have no data available:
34 (10 BP), 52 (4 M), 53 (3 M), 55 (5 M)

Soil Classification per Risk Assessment Question # 11.

Attachments: #7 - Geology/Logs Information 7 pgs

Hydrogeology

3 Aquifers. 80 GW wells: 71 A 8 B 1 C

A aquifer = 15 - 30 ft
B aquifer = 45 - 70 ft
C aquifer = 190 - 220 ft

GW flow direction A aquifer = N-NE per EMCON 2/82; N Canonie 3/83
B aquifer = N

Shallowest GW on site = 10.5 ft well 47-A (9 L), 2/82;
off site = 4.5 ft well 66-A Moffett 6/82

GW gradient = .0035 ft/ft
velocity = 9.4 ft/yr

Aquitards in the upper zone may be discontinuous, and on a regional basis, leaky confinements.
Perched and semi-perched GW known to occur in upper zone at depth ~20 ft or less.

Most major water supply wells in area draw from C aquifer.
Private wells for domestic supplies and irrigation usage are generally perforated in B aquifer.

Attachments: #8 - Hydrogeologic Information 16 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions #1,2,3,4.

Total chemicals detected GW = >10 soil = >10

A aquifer contamination, highest concentration & location (ppb):

TCE	1,000,000	5-A	Bldg 19	2/82
1,1,1-TCA	420,000	37-A	Bldg 9	2/82
Acetone	450,000	36-A	Bldg 9	2/82
1,2-DCE	330,000	39-A	Bldg 9	2/82
Xylene	71,000	37-A	Bldg 9	2/82
1,1-DCE	20,000	5-A	Bldg 19	2/82
IPA	26,000	36-A	Bldg 9	2/82
PCE	470	31-A	Bldg 9	1/85

B aquifer contamination, highest concentration & location (ppb):

TCE	130,000	4-B	Moffett	7/82
1,1,1-TCA	3,600	1-B	Bldg 19	1/83
1,2-DCE	4,500	2-B	Bldg 1	12/84
1,1-DCE	600	4-B	Moffett	10/84
PCE	90	4-B	"	6/82

C aquifer contamination (1 well):

TCE	1 ppb	1/83
TCA	0.2 ppb	"

6/26/85 No contamination detected in deepest well 1C (205 ft) since 1/83.
Deepest contamination detected in well 6B (next to 1C, 95 ft) from 7/3/82 through 1/25/85, latest data for this summary.

Offsite wells to West =

16-A	TCE	30 ppb	6/84;	TCA	2 ppb	3/84
46-A	TCE	60 ppb	4/82;	TCA	450 ppb	4/82
61-A	TCE	17 ppb	12/83;	TCA	110 ppb	5/84

Offsite well to East =

20-A	TCE	26 ppb	10/82;	TCA	0.8 ppb	10/82

Offsite wells to North =

63-A	TCE	6300 ppb	5/84	TCA	886 ppb	4/82
64-A	TCE	106 ppb	4/82	TCA	9 ppb	4/82
65-A	TCE	3600 ppb	8/84	TCA	660 ppb	6/82
66-A	TCE	1400 ppb	6/82	TCA	160 ppb	10/84

Leaks:
Facility Questionnaire for Bipolar Division states "piping leaks" in tank;
"Liner damage apparent in sump at Bldg 9 and in the 2 west side acid neutralization sumps". (Attachment #3)
EMCON 2/82 reports for Linear, Hybrid, Bipolar Bldgs suggest sources in area.
Canonie 6/83 report notes Bldg 19 highest concentration TCE;
Bldg 9 local source TCA.

Plume Maps provided by Canonie for TCE, TCA.
RWQCB maps re: highest concentration points.

Extraction Wells: 69-A near Bldg 9 and 71-A near Bldg 19

Soil contamination highest at (ppb):

TCE	55,000	Bldg 19	2/82
TCA	2,000	"	"
Ethyl benzene	1,500	Bldg 20	4/82

Attachments:

#9	GW Data	25 pgs
#10	Soil Data	11 pgs
#11	Canonie Plume Maps	7 pgs
#12	RWQCB Maps	5 pgs
#13	EMCON, Canonie Sources	9 pgs

D. Case Chronology

2/82	Fairchild initiated subsurface investigation for Linear, Hybrid, Bipolar Bldgs per EMCON Asso Findings - GW/soil contamination
3/82	Materials Division Bldg investigation Findings - low contamination
3/82	Fairchild/RWQCB meeting
4/82	EMCON investigation B aquifer near Bldg 9 (Bipolar) Findings - contamination
5/82	Facility Questionnaires completed
7/82	Canonie Remedial Action plan off site wells, extraction wells
7/82	EMCON Supplemental Hydrogeologic Investigation II
6/83	Canonie Subsurface Investigation report Vol I - text; Vol II - graphs
6/84	RWQCB site visit
7/84	RWQCB correspondence requesting tank info
8/84	Canonie status report
12/84	Canonie "
1/85	Canonie "

3/85 Fairchild Summary Chronology

Attachments:		
	#14 - RWQCB Correspondence	3 pgs
	#15 - Fairchild Chronology	6 pgs

E. Current Status

3/85 OnGoing case to define extent of plume, clean-up plans;
1 of 5 companies in area for investigation

Attachments:		
	#16 - RWQCB Correspondence Jan-March 85	25 pgs
	#17 - City of Mt View, State Correspondence	2 pgs

F. References

1. EMCON reports
2. Canonie Reports
3. Facility Questionnaires
4. Correspondence (as above)

Intel Corporation
365 E. Middlefield Rd
Mountain View, Ca

Site #: OG 7
File Name: Intel

Facility: 1 Bldg
Date Reviewed:9/84;3/85

Reviewer:LAP/LK

A. Description of Site

Facility built in 1965, used by Union Carbide Corp for 3 years in manufacturing semiconductor chips.
Intel operated on site from 1968-1981 manufacturing semiconductors.
Facility presently vacant.
Original use of site = agricultural, primarily orchards.

Intel not part of RWQCB Leak Detection Program so Facility Questionnaire with history of underground tanks, installation dates, etc., not available. Information requested by RWQCB 7/84; not received by 3/1/85.

1 1500 gal underground waste solvent tank
3 1200 gal acid neutralization tanks

Chemicals used on site: TCE 1971-1977; 1,1,1-TCA 1977-1981; Xylene, Acetone, n-Butyl acetate, Isopropyl alcohol (IPA), Freon-TF (113), Ethyl benzene.

Facilities in area under investigation by RWQCB: Fairchild, NEC, Raytheon, and Siltec.

Attachments:	#1 - Site Location Map	2 pgs
	#2 - Facility Map	3 pgs
	#3 - Facility Information	5 pgs

B. Geology

Intel is located in the baylands portion of the Valley.
Soils are composed of interbedded sands, gravel, silts and clays; sand and gravel units generally found as meandering lenses in prevailing clays; limited lateral continuity.
Soils in vadose zone near underground tanks dominantly sandy and silty clays.
Deepest boring = I-3 to 111.5 ft.

Boring Logs for groundwater (GW) monitoring wells attached.
Boring Logs for soil samples S-1 through S-14 by Weiss Associates located in Weiss 10/84 report.

Soil Classification per Risk Assessment Question # 11.

Attachments:	#4 - Geologic Cross Section	2 pgs

#5 - Boring Logs, EMCON	25 pgs
#6 - Boring Logs, WCC	10 pgs
#7 - Boring Logs, Weiss	8 pgs

Hydrogeology

25 current GW monitoring wells. 3 aquifers defined:

	A	B	C
	semiconfined	semiconfined	confined
depth	16-43 ft	56-80 ft	100-150 ft
hydraulic grad	.0064 ft/ft	.002 ft/ft	.0017 ft/ft
velocity	.55 ft/day		.171 ft/day
flow direction	NE	N	NE to N-NW

shallow hydraulic conductivity	110=170 gpd/sq ft
" transmissivity	5700-8800 gpd/ft
" storage coefficient	.005-.007

Shallowest GW = 21.62 ft, I-7, 9/84

A primary feature of the shallow zone potentiometric surface is the potentiometric high near well E-13 east of bldg. Hydraulic gradient near E-13 is .04 ft/ft vs .0064 ft/ft. Velocity near E-13 is 3.42 ft/day vs .55 ft/day.

Depth and thickness of A and B zones vary considerably and discrete A and B water bearing zones not present at some locations.

GW wells destroyed: EMCON- 1, 2, 3, 4, 5, 20, and 21;
Woodward Clyde WCC I- 1, 2, and 3.

7 water wells located in vicinity of Intel.

Attachments:		
	#8 - Hydrogeologic Information	12 pgs
	#9 - Wells Destroyed	2 pgs
	#10 - Water Wells in Vicinity	5 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected in GW = >10 soil = >10

Initial soil/GW investigation 9/1981 showed major contamination SE corner of bldg with chemicals stored on site (ppb):

	soil		GW	
TCE	13,200	25-26.5ft, E-2	49,000	E-3
Xylene	116,000	19-20.5ft, E-4	1,463,000	E-4

However, this data taken from EMCON wells not properly converted for GW monitoring; not used in Ranking.

GW data from Scientific Cleaner & Lab 12/81 shows very high concentrations from well #20 (ppb):

TCE	80,000
Xylene	675,000

D'Appolonia maps of TCE, Xylene use EMCON 10/81 data but accuracy not clear.

GW/Soil concentrations used in Ranking per EMCON (ppb):

	GW		soil	
TCE	21,600	E-18, 10/81	6,000	E-20, 1/82
Xylene	170,000	E-20, 1/82	170,000	E-20, 1/82

B aquifer GW contamination with chemicals on site =

Ethyl benzene	20,000 ppb	I-2, 91.5ft
IPA	1,300 "	"

C aquifer GW contamination (ppb, Weiss 6/84) =

1,2,4-Trichlorobenzene	380	at I-2C
1,2,3-Trichlorobenzene	180	"

Other chemicals stored and detected in GW:

Freon	130,000 ppb	E-13
Acetone	75,000 "	E-1
1,1,1-TCA	370 "	E-8

Vinyl chloride reportedly not stored; detected 12,000 ppb E-15D

Leaks:
10/81 Leak detected in waste solvent tank and vault joints; tank removed 12/81 (see Case Chronology attachment).
11/83 D'Appolonia report also refers to leak in sump NE corner of neutraization chamber.

Off-site migration:
Off-site migration detected late 1981,early 1982.
Off-site well 6S2W23M1 = 63 ppb TCE.

Aquifer restoration via carbon adsorption unit begun 3/82.
2 extraction wells installed 1/85.

Soil excavation and concrete vault removed 9/84.

Attachments:		
	#11 - Soil/GW Data, EMCON 1981	14 pgs
	#12 - Soil/GW Data, WCC 1982	5 pgs
	#13 - WCC Plumes	4 pgs
	#14 - Data/Plume, D'Appolonia 1983	2 pgs
	#15 - GW Summary, IT 1984	5 pgs
	#16 - Soil/GW Data, Weiss 1984	19 pgs
	#17 - Leaks Information	3 pgs
	#18 - Off-Site Migration	3 pgs
	#19 - RWQCB Plume Maps	4 pgs

D. Case Chronology

Facility investigation pre-RWQCB Leak Detection Program.

Facility provided chronology with the following additions:

9/81	Fairchild initiated subsurface investigation of site; EMCON results showed soil and GW contamination
10/81	Intel retained EMCON for subsurface investigation
6/82	Woodward Clyde Consultants report for Intel
11/83	D'Appolonia report for Intel
7/84	IT report for Intel
10/84	Weiss report for Intel

Attachments:	#20 - Facility Chronology	2 pgs
	#21 - Additional Information	8 pgs

E. Current Status

3/85 Intel one of 5 companies in area under RWQCB investigation and clean-up
Case OnGoing Phase III
NPDES permit for discharge to storm sewer pending soil excavation/backfill
4 extraction wells to be installed

Attachments:	#22 - RWQCB/Intel Correspondence	10 pgs
	#23 - RWQCB File Summary	3 pgs

F. References

1. EMCON (Attachment 21) 11/81 Report
2. WCC 6/15/82 Report
3. D'Appolonia 11/83 Report
4. IT 7/84 Report
5. Weiss Associates 10/9/84 Report
6. Correspondence (as above).

Raytheon Company
350 Ellis St (Bldg 3)
Mountain View, Ca 94042

Site #: OG 8
File Name: 3Ray

Facility: 1 bldg
Date Reviewed: 9/84;3/85;5/31/85

Reviewer:LAP/LK

A. Description of Site

Prior to 1961 property occupied by Rheem Corporation for manufacturing of semiconductor & other electronic products.

Raytheon began use on site in 1959; 1961 Raytheon leased bldg, purchasing it in 1976; existing wastewater treatment facilities placed in operation for manufacturing of semiconductors; dischages acidic wastewater to 2 neutralization units; treated effluent to local sewer lines.
24% of facility is facbrication area.

Tanks on site:
1 2800 gal underground concrete sump for acid waste neutralization; installed 1959; in use
1 1500 gal above ground acid waste neutralization tank; installed 1959; in use
1 60 gal underground non-vaulted solvent waste holding tank; installed 1967; in use
1 144 gal partially below grade solvent waste holding tank in sump; installed 1972; not used since 4/85
2 4000 gal underground acid waste neutralization tanks; installed 1967; in use
1 500 gal underground cyanide treatment tank; installed 1967; in use

1 4700 gal tanker trailer and several smaller above ground tanks used as collection points for offsite disposal of solvent wastes from 1967 to date (5/85).

Chemicals on site: >35
Major chemicals = 1,1,1-TCA, TCE, Xylene, Acetone, Isopropanol, Methyl alcohol, Freon TF, Methyl Ethyl Ketone, n-Butyl acetate, KTI Resist, Stoddard Solvent, Ethylene glycol.
Others include developers, resists, strippers, and solvents; compositions not specified.

Other facilities in area = Intel, NEC, Siltec, and Fairchild.

1982, RWQCB requested subsurface investigation of Raytheon after GW contamination with TCE in 3 wells adjacent to Raytheon property downgradient (north).

Attachments: #1 - Site Location Map 3 pgs
#2 - Facility Map
#3 - Facility Information 5 pgs
#4 - Facility Questionnaire 6 pgs

#5 - EMSI Report re: Tanks	2 pgs
#6 - RWQCB Memo re: Tanks	3 pgs
#7 - Chemicals OnSite	3 pgs

B. Geology

Soils beneath site predominantly silty clay of moderate to high plasticity, underlain by series of granular sediments interlayered with clay and silty clay.

Deepest boring = exploratory R-5Bex to 151.5 ft
Deepest MW = R-4B to 86 ft; well completion diagrams with slotted intervals located in HLA 5/15/85 report.

Soil Classification per Risk Assessment Question # 11.

Attachment: #8 - Boring Logs 44 pgs

Hydrogeology

20 GW monitoring wells as of 5/85 =
15 A aquifer wells, 5 B aquifer wells

Shallow A aquifer - 20-40 ft (Beta 11/82); 15-30 ft (HLA 2/85)
Deep aquifer = 4 water bearing zones:
60-69 ft, referred to as B aquifer
74-80 ft
91-100 ft
127-137 ft

GW flow direction = N for A and B aquifers
Shallowest GW = 12.02 ft R-3B, 4-5-85

GW gradient A aquifer = .003-.004 (HLA 2/85)
B aquifer = .002 (HLA 5/85)
hydraulic conductivity A aquifer = 0.5 - 23 ft/day
B aquifer = 70-170 ft/day
velocity A aquifer = 80-200 ft/yr; B = 250 ft/yr, avg

Artesian head ranging 1-3 ft commonly encountered in A aquifer in study area.

Lower aquifer at >250 ft depth.
GW production for industrial/commercial use obtained from these deeper wells. It is not clear if Raytheon uses these wells.

Attachments: #9 - Hydrogeology Information 14 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected: GW = >10   soil = 10

11/82 GW analysis showed highest concentration of TCA, TCE found at R-1, NW of bldg (ppb):

TCA	27,000
TCE	6,700

Highest DCE 11/82 at R-5 = 1500 ppb.

Plume maps for TCA, TCE, and DCE provided by Beta Asso.
RWQCB plume map also drawn for TCA, TCE, DCE.

EMSI inspection 10/82 of wastewater treatment system at Bldg #3 showed Fab wastewater system had several areas with damage:

1. Discharge pipe to sewer had erosion of liner and concrete
2. Sealed pipe no longer used had liner failure and concrete erosion
3. Discharge and opposite wall had liner flaking away from mat at water line; could not be determined if damage to concrete behind liner.

Repeat GW sampling 10/84 unable to sample from either R-1 or R-5 "as PVC casing suffered deformation sufficient to prevent installation of sampling pump."

Highest chemicals detected 10/84 (ppb):

TCA	352	R-2
TCE	7,714	R-8
PCE	460	R-6
1,1-DCE	2,123	R-2
Xylene	21.11	R-3

9/84 report showed   Trans-1,2-DCE   1267.6 ppb   R-7

2/85 Soil Gas sampling used to detect VOCs in shallowest GW zone (A aquifer) and vadose soils above that zone showed (ppb):

Freon-113	20,000	SR 64, 68, 89
TCA	10,000	SR 73
TCE	90,000	SR 68
PCE	15	SR 16

Soil Gas sampling report notes distribution present in 4 areas:

1. SW corner Bldg
2. W side of Bldg near Boring R-9
3. NW of Bldg
4. near R-2 and R-3, N of bldgs to west of Bldg 3

These areas associated with chemicals storage/treatment on site, and possible source areas.

Soil analysis done 11/82 showed (ppb):

TCE	14,000	Boring 4	35 ft
DCE	2,600	" 3	40 ft
TCA	1,200	" 3	10 ft

Borings 3 and 4 located W of Bldg near chemical storage tanks, watse lines.

Complete analytic reports for soil samples not included in 11/82 Beta Report. Only Table 1 displays sample depths for 3 selected chemicals.

5/85 data showed TCE (ppb):
soil - 19,000 RF-6, 19 ft
GW - A aquifer 200,000 R-17A
B aquifer 22,000 R-4B

HLA 5/85 report notes 5 source areas:
area 1 - offsite, South of Bldg 1
area 2 - SW Bldg 3, waste solvents contained prior to disposal
area 3 - NW Bldg 3 near chemical storage shed
area 4 - N Bldg 3 near waste disposal lines
area 5 - N of records and maintenance storage bldg, extending N between R-5B and Fairchild 7B

Attachments: #10	Soil/GW Data 11/82	10 pgs
#11	Beta Asso Plume Maps	3 pgs
#12	RWQCB Plume Map	
#13	Fab System Damages	4 pgs
#14	GW Data 10/84,9/84	19 pgs
#15	R-1, R-5 Information	2 pgs
#16	Soil Gas Data,Maps,Info	12 pgs
#17	Soil/GW Data 5/85	7 pgs
#18	HLA TCE Plume Maps	4 pgs
#19	HLA Source Areas	

D. Case Chronology

5/82 Facility Questionnaire completed for Leak Detection Program
11/82 Phase I investigation by Beta Associates
Findings - soil and GW contamination
Fab system damages
6/84 RWQCB site visit
7/84 RWQCB Correspondence requesting historical information re: chemicals,tanks
10/84 Harding Lawson (HLA) proposal for Soil Gas sampling
11/84 State Water Resource Control Board correspondence, recommendations for site
2/85 HLA report with Soil Gas sampling
Findings - distribution located around areas of chemical storage/treatment on site
Proposed - 7 additional A aquifer monitoring wells
5 B aquifer wells
5/85 HLA report: A, B aquifers and soil contaminated

E. Current Status

5/85 OnGoing case for plume containment, clean-up
One of 5 Companies in area for clean-up per RWQCB
(See Attachment #6).

Attachment: #20 - RWQCB/SWRCB Correspondence 6 pgs

F. References

1. Beta Associates Reports: 11/82, 9/84, 10/84
2. Harding Lawson Associates Report 2/85, 5/14/85
3. Correspondences (as above)
4. Facility response to RA Summary (Cooley, Godward, Castro, Huddleson & Tatum letter 5/85)

Raytheon Company Site #: OG 8
415 E. Middlefield Rd (Bldg 2) File Name: 2Ray
Mountain View, Ca 94042

Facility: 1 bldg
Date Reviewed: 9/84;3/85;5/85 Reviewer:LAP/LK

A. Description of Site

Raytheon Bldg #2 constructed in 1965; leased by Union Carbide from 1965-1968 for manufacturing semiconductors.
Raytheon leased site from 1968-1983; bldg upgraded for manufacturing of semiconductors; transistor chip fabrication area on site.
Process used on site discharged wastewater to neutralization unit and treated effluent discharged to local sewer line.

2 2000 gal underground vaulted acid neutralization tanks; constructed 1965; used by Union Carbide 65-68, by Raytheon 86-81, and jointly by Raytheon/Intel 69-73.
Tanks removed 10/82, repaired & in service 12/82- early 83.

Chemicals on site:
Facility Questionnaire lists acids used and Buffered Etch 7:1, KTI pad etch (composition not specified).
Solvents used: 1,1,1-TCA, Xylene, Acetone, Isopropanol, Methanol, Genesolv D (Freon TF), Fluochemical FC, Methyl Ethyl Ketone, n-Butyl acetate, A-30 (composition not specified).

Facility to West = Intel. Other companies in area = Fairchild Camera and Instrument, NEC, Siltec.

Attachments:		
	#1 - Site Location Map	2 pgs
	#2 - Facility Map	
	#3 - Facility Questionnaire	6 pgs
	#4 - Facility Information	3 pgs
	#5 - Chemicals OnSite	2 pgs

B. Geology

Soils beneath site predominantly silty clay of moderate to high plasticity, underlain by series of interlayered granular sediments, clays, and silty clays.

6 soil borings on site; deepest boring = 26.5 ft.

Soil Classification per Risk Assessment Question # 11

Boring Log for A aquifer monitoring well 3/85 pending.

Attachment: #6 - Boring Logs 12 pgs

Hydrogeology

1 A aquifer Monitoring well installed 3/85 SW corner Bldg #2;
Sampled and results pending.

Aquifer characteristics in vicinity as follows:
A aquifer - 20-40 ft depth (Beta Asso 11/82)
15-30 ft depth (Harding Lawson "HLA" 2/85)
B aquifer - 60-100 ft depth (11/82)
40-70 ft depth (2/85)

Shallowest GW on site per Boring Logs = 10 ft, B-5, 10/82 p.2
GW flow direction on site = North; other companies report NE

HLA 2/85 report:
GW gradient = .003-.004
Hydraulic conductivity = 7-14 ft/day
Velocity (assumed porosity 0.1) = 80-200 ft/yr
A/B aquifers may be hydraulically connected some areas of site.
Potentiometric high near Neutralization Pit reported 1982, but absent 9/84 data.

GW production for industrial/commercial use obtained from water wells in vicinity at >250 ft.

Attachments: #7 - Hydrogeologic Information 6 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected:
GW- pending soil- only 5 tested and detected

11/82 soil analysis for TCA, TCE, and DCE only; 6 borings around neutralization pit; one in backhoe NE of neutralization pit. Highest contamination (ppb):

TCA	1500	12.9 ft	backhoe pit
TCE	18,000	"	
DCE	110	25 ft	B-3A, W of neutralization pit

Analysis of wastewater effluent, discharged to sewer line 20 ft N of pit, showed
Phenol 2600 ppb

Leaks:
1. damaged neutralization vessel
2. small leak in sump in NE corner of neutralization chamber
3. pipe coupling wastewater discharge line to sewer showed wear

Harding Lawson (HLA) report 2/85 sampled soil around neutralization pit; only tested 4 chemicals (ppb):

Freon 113	9000	#118	SW of pit
TCE	2000	#102	NE "
TCA	2	# 97	S "
PCE	0.1	# 99	SE "

HLA report states "possible that Freon 113 may have been present in water lost from vault."

Soil gas data for 2/85 report not given in Table; taken from map.

Attachments: #8 - Soil Data for 6 Borings 7 pgs
#9 - Soil Data Backhoe
#10 - Wastewater Effleuent Data 3 pgs
#11 - Beta Asso Conatmination Maps 3 pgs
#12 - RWQCB Contamination Map
#13 - Leak Information 4 pgs
(See also Attach 14 p.2)
#14 - Harding Lawson Info/Map 4 pgs

D. Case Chronology

5/82 Facility Questionnaire completed for Leak Detection Program
11/82 Beta Associates Report for Raytheon Bldg #2
Findings - only soil analyzed
contamination around pit and sewer effluent
6/84 RWQCB site visit Bldg #2
7/84 RWQCB Correspondence requesting historical and current info re: chemicals, tanks, status
11/84 State Water Resource Control Board comments and recommendations for Bldg #2
2/85 Harding Lawson Report of Soil Gas Samples Bldg #2
Findings - 2 additional chemicals tested for & present
recommend GW monitoring well
3/85 A aquifer monitoring well installed and sampled
Findings = pending
3/85 Raytheon one of 5 Companies defining plume & clean-up with RWQCB

E. Current Status

3/85 OnGoing Case to define plume & clean-up

Attachments: #15 - RWQCB Correspondence re: Site Visit 3 pgs
#16 - State Board Correspondence 3 pgs
#17 - RWQCB Memo re: Status 3 pgs
#18 - Facility Correspondence re: Status

F. References

1. Beta Asso Report 11/82
2. Harding Lawson Report 2/85   5 pgs
3. Correspondences (as above)
4. Facility response to RA Summary (Cooley, Godward, Castro, Huddleson & Tatum 5/85).

Raytheon Company	Site #: OG 8
490 E. Middlefield Rd (Bldg 1)	Flie Name: 1Ray
Mountain View, Ca 94042	

Facility: 1 Bldg	
Date Reviewed: 3/85;5/85	Reviewer: LK

A. Description of Site

Facility Questionnaire shows no underground units.

Raytheon Bldg 1 is a test and assembly facility, designated as a "dry" bldg with no hazardous effluents.

Raytheon Company part of area-wide study which includes: NEC, Intel, Siltec, and Fairchild Camera and Instrument.

Attachments:		
#1	Site Location Map	
#2	Facility Questionnaire	4 pgs
#3	Facility Information	2 pgs

B. Geology and Hydrogeology

See Raytheon Bldgs 2 and 3 Risk Assessment Summaries.

Boring Log R-15 pending.

C. Contamination

Soil gas sampling 2/85 done on 11 samples around Bldg 1 with highest concentrations detected as follows (ppb):

Freon-113	355	at #30
TCA	200	at #92
TCE	30	at #92
PCE	60	at #94

Soil gas method detects compounds in the vadose zone and shallowest aquifer (A aquifer).

A aquifer monitoring well R-15 installed 3/85 SW corner of Bldg #1; sampled twice = TCE 3100 and 3700 ppb.
Soil samples taken upon installation showed no TCE at 3,6,9,10, and 12 ft depth.

Attachment:		
#4	Soil Gas Data/Map	2 pgs
#5	R-15 Data/Map	4 pgs

D. Case Chronology

5/82	Facility Questionnaire completed for RWQCB Leak Program
2/85	Phase I Report by Harding Lawson Associates (HLA) Soil gas analysis Findings - soil contamination
3/85	GW monitoring well R-15A installed and sampled Findings = contamination
4/85	HLA preliminary report of 13 soil borings, 17 A aquifer MWs and 5 B aquifer MWs for Raytheon Bldg 1 and 3

E. Current Status

3/85	Bldg 1 not a "case" since no underground tanks. HLA monitoring well on site to define contamination regarding Raytheon Bldgs 2 and 3. Part of area-wide study.

F. References

2/85	Harding Lawson Asso Report (attached)	9 pgs
4/85	HLA preliminary report	
5/85	Facility response to RA Summary (Cooley, Godward, Castro, Huddleson & Tatum letter).	

Siltec Corporation — Site #: OG 9
405 National Ave, Mt.View 94040 — File Name:Siltec

Facility: 1 Bldg
Date Reviewed: 9/84;3/85;5/85 — Reviewer:LAP/LK

A. Description of Site

Bldg constructed in 1966; ownership/usage as follows:

Elmat Corp	1966-1967	silicon furnaces
Gen Instru Corp	68-3/78	silicon wafers
Siltec	4/78-83	"
Siltec	83-84	R & D

7 underground non-vaulted waste storage tanks history as follows:

A	1050 gal	acid neutralization	68-79	
		process rinse water	79-85	in use
B&C	93 gal	chemical spillage	68-85	never used
D&E	560 gal	caustic neutralization	79-81	
		process rinse water	81-85	in use
F	1000 gal	silicon sludge clarifier	68-85	in use
G	375 gal	acid neutralization	68-79	
		"	79-81	not in use
		"	82	abandoned

Above ground storage tanks history as follows:

1	200 gal	waste TCE storage, SW corner of site; in use 68-78; removed
1	500 gal	waste caustic storage, E of Bldg; installed 1981; in use.

Chemicals used on site:
TCE (last used 4/79); Methylene chloride (last used 11/84); Methanol (last used 12/83); Freon TA (last used 12/81). Acids = Acetic/Nitric (last used 79); Chromic hydrofluric, and Potassium hydroxide.

Siltec purchasing cards for TCE show 4/79 last order date.

Facility states TCA, PCE, Xylene and Toluene never used at site. RWQCB correspondence 7/25/84 requests sampling for TCE, TCA, DCE, PCE, Xylene, and Toluene.

Siltec next to Fairchild Camera and Instrument Corp Bldg 9; Other Facilities in immediate area: NEC, Raytheon, Intel.

Attachments:

#1 - Site Location Map		
#2 - Facility Map		
#3 - Facility Questionnaire	7 pgs	
#4 - Facility Information	3 pgs	
#5 - RWQCB/Facility Correspondence	6 pgs	
#6 - Facility TCE Records	4 pgs	

B. Geology

Near surface geology appears to consist of unconsolidated interfluvial basin deposits rather than alluvial fan deposits; complex and irregular series of interbedded gravels, sands, silts, and clays.
Deepest boring = 41.5 ft Sil-1.

Area around facility known to have undergone at least 6 ft of subsidence in last 50 yrs as result of regional GW overgrafts.
Area on margin of saltwater intrusion in shallow aquifers.

Soil Classification per Risk Assessment Question # 11.

Attachments: #7 - Boring Logs 7 pgs

Hydrogeology

3 GW monitoring wells. 1 aquifer sampled.

Aquifer depth = 10.5-36.0 ft
Shallowest GW = 14.34 ft, Sil-1, 8/3/84.
GW flow direction = not determined for site; taken from work reported to RWQCB to be North (Attachment 4 pg3); neighboring sites report NE flow.
GW gradient = not determined.

Attachment: #8 - Hydrogeologic Information 3 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected in GW = 9 soil = 2

Number and concentration of chemicals detected in GW highest at Sil-1, site of former tank, SW corner of facility (ppb):

Trans-1,2-DCE	24,000	10/82
TCE	17,000	"
Freon-113	1,500	8/84
PCE	1,400	9/82

Soil contamination at Sil-1 and Sil-3 10/82; not resampled 8/84:

TCE	570 ppb	Sil-1
Toluene	1,200 "	Sil-3

Sumps sampled 6/82 showing TCE (ppb):

Tank B	32
Tank C	820
Tank D	84

Wahler Assoc report 11/82 notes:

1. **Floride in soil probably originated on-site from silicon process chemicals**
2. **Toluene in soil probably originated on-site from widespread use of petroleum products.**

Difficult to document off-site source of contamination due to lack of GW flow direction on-site.

Attachments:	**#9 - Wahler Report Plume Map**	
	#10 - GW/Soil Data 10/82	**10 pgs**
	#11 - Sump Data	**3 pgs**
	#12 - GW Data	**5 pgs**
	#13 - Wahler Report Info	**3 pgs**

D. Case Chronology

6/82	**Facility Questionnaire completed for RWQCB Leak Detection Program**
6/82	**"Sump" sample detected TCE**
11/82	**Phase I Subsurface Investigation by Wahler Asso** **Findings - soil and GW contamination**
3/83	**DOHS inspection revealed several code violations, including waste storage w/o Berms; cracked concrete in acid storage area**
8/84	**GW wells resampled** **Findings - some chemicals decreased in concentration; some new chemicals detected**
1/85	**Facility part of 5 in area under investigation by RWQCB**

E. Current Status

3/85 OnGoing case
Part of "Mountain View 5" Clean-up program

Attachments: #14 - RWQCB Memo re: Status

F. References

Wahler Report 11/82.
Wahler Correspondence 8/84.
Correspondences (as above).

FAIRCHILD CAMERA AND INSTRUMENT CORP.
101 Bernal Road
San Jose, CA

Site #: OG 10
File Name: B:FC-SJ

Reviewed 11/5/84; 6/18/85

Reviewer: MCT

A. Description of Site

Fairchild began operation at this site 4/77 but no specifics on operations or information on prior use of site in file (See Attachment #3 for chronology of operations)(3). Manufacturing operations at the facility ceased in approximately October, 1983 (7).

Until 12/81 waste solvents stored in one 6,000 gal tank and in a 500 gal solvent tank at the Chem Mix building. After December 1981, solvents were stored in the Chem Mix tank and in a temporary 1,000 gal above-ground tank until September 1982. After September 1982, a tanker truck vessel was used to store waste solvents.

Solvents used on site (3):

Acetone	Isopropanol (IPA)
Freon	Hexalmethyldisiazane (HMDS)
Xylene	1,1,1-TCA

A-30 (photoresist remover) - contains Tetrachoroethylene (PCE), Dichlorobenzene (DCB), Trichlorobenzene (TCB), and Phenol.*

J-100 (photoresist remover) - contains PCE, DCB, TCB, and phenol.*

Markham 320 Cleaner - contains ethanol and ethyl acetate (7).

Photoresist Material - contains Xylene.*

*Constitiuents of compounds from PWJ meeting with Fairchild representatives (PWJ verbal communication 10/31/84)

No facilities questionnaire in file.

Attachments: #1 Site Location Map
#2 Site Map
#3 Chronology of Operations

B. Geology

Stratigraphy of site sand and gravel layers interspersed with silt and silty clay layers of varying thickness. Site located in Santa Teresa Plain, bounded to the southeast by the bedrock outcrop of the Coyote Narrows and to the north by Edenvale Ridge and Oak Hill. (4)

90+ borings; deepest 330.5 ft. Boring log for Recovery Well 23 not in file.

Soil classification per Risk Assessment Question #11.

Attachments: #4 Map of Regional Geology
#5 Soil Profiles
#6 Boring Logs

Hydrogeology

Four aquifer layers defined (4):
"A" layer 30-50 ft. from surface except for one Monitoring Well (MW) (WCC-34) where no "A" layer was found.
"B" layer 60-100 ft. In MWs RW-10 and GO-4 "A" and "B" layers merge.
"C" layer 150-190 ft.
"D" layer 220-270 ft.

GW gradients (2):
"A" layer: 0.4-0.5% to the Northwest
"B" layer: 0.16% to the Northwest onsite
0.20% to the Northwest offsite at GOWD-13
"C" layer: Average gradient 0.06% to the West and Northwest

Transmissibility - data from pumping tests as follows (4):
Onsite "A" & "B" combined - 334,000 gpd/ft.
Offsite "B" - 148,000-190,000 gpd/ft.
Offsite "C" & "D" - 265,000-312,000 gpd/ft.

Permeabilities - data from pumping tests as follows (4):
Onsite "A" & "B" combined - 0.26 cm/sec.
Offsite "B" - 0.18 cm/sec.
Offsite "C" & "D" - 0.16-0.20 cm/sec.

Permeabilities of clay & silt between "A" & "B" onsite 2.5 x e-7 - 5 x e-8 cm/sec. USCS classified ML-CL to CL. (4)

Shallowest groundwater (GW) 31 ft. GW gradient ~1%, flow to the northwest. GW velocity immediately downgradient from Fairchild plant between 1.4-2.7 ft/day. (1)

"The A aquifer has not produced water since approximately January, 1984. Consequently, the groundwater gradient stated in the summary for the A aquifer is no longer accurate. Similarly the gradients in the B aquifer have changed since the data used for the case summary was compiled."(7)

Subsurface channel indicated in Fairchild study area, passing plant property just to the north and merging with the present Canoas Creek somewhere in the vicinity of water supply well GO-4 (M). Area of waste solvent tank failure located on less permeable soils alongside channel. (4)

Clay beds in area of site are discontinuous and considered poor hydraulic barriers to vertical GW migration (1).

Most GW recharge comes from infiltration ponds along Coyote Creek, the largest of which are Ford Road and Coyote Creek Ponds. Drainage system consists of Coyote Creek and Canoas Creek, a branch of the Guadalupe River. (2)

Several wells in the site region can produce >3.3 cfs (1,500 gal/min). Average GW production in 1981 19 cfs (13,000 acre ft/yr), about 80% of which was produced by the Great Oaks Water District, the local water company. (2)

Restriction at Coyote Narrows causes a 40' drop in GW level in 1 mile between Coyote and Santa Teresa Plains (see Attachment #4). Edenvale Gap causes another restriction of GW flow, causing a 90 ft. GW level drop between the Santa Teresa and San Jose Plains. (4)

60+ Monitoring/Pumping Wells; deepest 330.5 ft.

Attachments: #7 GW contours 9/84
#8 Water Production Map for 1981
#9 Active wells in site area

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: Acetone, IPA, 1,1,1-TCA, Xylene, PCE, Freon in soil and GW; Hexamethyldisilane in soil only.

Soil contamination - 10+ chemicals. Major contaminants:

IPA	7,400 ppm
Acetone	5,300 ppm
1,1,1-TCA	1,600 ppm

GW contamination -

"A" aquifer - 8 chemicals. Major contaminants:

IPA	43,000 ppm
Acetone	25,000 ppm
1,1,1-TCA	900 ppm

"B" aquifer - 7 chemicals. Major contaminants:

1,1,1-TCA	670 ppm
IPA	340 ppm

"C" aquifer - 3 chemicals. Major contaminants:

1,1,1-TCA	120 ppb
1,1-Dichloroethylene	4 ppb

"D" aquifer - no contamination (1 MW only)

History of contamination problem (4):

Nov. 19, 1981 - leaking wastewater pipeline discovered near the NW side of the mfg. facility operated by the Fairchild MOS Division (1). Fairchild hired Emcon Associates to perform soil tests. Emcon installed monitoring wells on November 21, 1981. Analysis of samples from the wells showed concentrations of solvents (7).

December 3-4, 1981 - Fairchild excavated the 6,000 gal waste solvent tank, and gave notice to Great Oaks Water Company and government agencies that the tank had leaked. As a precaution, Great Oaks Water Company shut down its Well No. 13 on December 4 (7).

Dec. 7, 1981 - TCA detected in drinking water supply well owned and operated by the Great Oaks Water District ~1800 ft. NW of Fairchild plant - well shut down same day (4). Woodward-Clyde Consultants retained to perform a hydrogeologic study (7).

By January, 1982, groundwater pumping and treatment was commenced, and has continued since. The groundwater remedial program now involves over 100 sampling and recovery wells (7).

Soil removal program instituted - area adjacent to former waste solvent storage tank excavated and 2 recovery/injection wells installed on periphery of soil removal area. GW treatment in fixed bed downflow carbon adsorption system, then discharged to Canoas Creek through City of San Jose storm sewers. Treatment discontinued 12/82 when GW met discharge limits for 1,1,1-TCA (4). The soils with the highest concentrations of contaminants were removed from the site and the excavated area was backfilled using special construction techniques to place concrete caissons immediately adjacent to the main buildings's foundation (7).

Contamination has migrated offsite - extraction wells have been installed onsite and offsite.

Upgradient sites: none
Downgradient sites: IBM. Magnex located to the west of Fairchild.

Attachments: #10 Woodward Clyde lab results 5/82
#11 Soil analysis results 1/83
#12 Summary of latest GW monitoring results (9/84)
#13 Canonie plume maps 1/83
#14 RWQCB plume maps
#15 Canonie plume maps 10/84

D. Case Chronology

For chronology of events from 11/21/81 - 1/27/83 see Attachment #16. From 1/27/83 - 10/84 quarterly status reports produced.

Attachments: #16 Chronology of events

E. Current Status (as of 11/5/84)

Ongoing Phase III - Fairchild seeks discharge permit similar to IBM's (PWJ verbal communication 10/31/84).

F. References

1. Emcon Associates Phase I report 12/81
2. Woodward-Clyde Consultants Phase II report 5/82
3. Fairchild South San Jose Material Balance Report 5/82
4. Canonie Environmental Services Corp. 1/83 Status Report
5. " " " " 4/84 " "
6. " " " " 10/84 " "
7. 205j case summary comments by Landels, Ripley & Diamond 3/29/85

INTERNATIONAL BUSINESS MACHINES CORPORATION Site #: OG 11
5600 Cottle Rd, San Jose 95193 File Name: IBM

Facility: 39 bldgs
Date Reviewed: 8/21/84;2/85 Reviewer: LK

A. Description of Site

First installation for industrial waste on site in 1956; major expansion years = 1963, 1973-1977, 1980-1983.
Previous use of site = agricultural.
IBM is world's principal manufacturer of data processing machines and systems; current manufacturing on site = storage disks, read/write heads, disk/head assemblies & data storage systems; some pilot-line manufacturing of cards, boards & semiconductor devices also performed.

Historical underground tank units as follows:
- 41 underground non-waste storage tanks
- 37 underground waste storage tanks
- 49 underground treatment units
- 3 tank farms (A,B,067)

12 locations on site where buried tanks removed/abandoned; most notable = 18 tanks removed 1980 Tank Farm 001, and 15 tanks removed 1984 Tank Farm 067.

6/84 tank status = 180 underground tanks, sumps, pits; 169/180 in use; 102 = waste; 67 = non-waste.

Chemicals on site: Ethyl amyl ketone (EAK), Isopropyl alcohol (IPA), Xylene, N-Methyl-2-Pyrrolidone (NMP), Methylene Chloride, Petroleum naptha (PN), 1,1,1-Trichloroethane (TCA), HCl acid, Kerosene, Nitrogen, Sodium bisulfate; 1,1,1-Trichloroethylene (TCE) in small lab quantities; cellosolves in small quantities. Tank diagrams also specify Freon (Freon-113), Acetone, Isophorone; "325 solvent" from demolition 001 tank farm = PN 365; solvent waste, mixed solvent waste, chlorinated waste, industrial waste from Industrial Waste System Legend.

Attachments: #1 - Site Location Map
#2 - NPDES page re: operations on site
#3 - Facility Questionnaire, 8 pgs
#4 - Current Chemical Tank Site Plan, 16 pgs
#5 - Past Facilities Site Plan, 8 pgs
#6 - Chemicals on site, 3 pgs

B. Geology

8 geologic sections identified from 1980-1984 (A-H); ground surface drops slightly to NW.
Sediments characterized by bodies of coarse sand and gravel with matrix of fine grained silt and clay.
Franciscan bedrock beneath sediments in valley and hills flanking area.
Geologic/hydrogeologic Regions identified in area:
I = on-site/off-site geology N to Branham Lane;
II = N of Branham Lane 2 bedrock ridges form a v-notch underground known as Edenvale Gap.
Regions not geohydrologically separate but interconnect B-C aquifer via Edenvale Gap.

Soil Classification per Risk Assessment Question # 11.

Attachments: #7 - Geologic Section Map
#8 - Site Stratigraphy/Soil Classification, 9 pgs
#9 - Location Map of Region I and II

Hydrogeology

IBM 7/84 report totals 326 wells. See "Contamination - Part II" for specification of on/off site wells/aquifers.

4 individual aquifers defined
A = identified at two-thirds of MW sites; depth = 20-50 ft
B = laterally extensive except at MW 4, 21; encountered at 60-90 ft; gravel layer 20-30 ft thick
C = identified at every MW in area; encountered at 90-130 ft; gravel layer 10-30 ft thick
D = gravel layer 5-30 ft thick

Major hydraulic connection on-site inferred for A,B, and C aquifers on site between Bldg 026 and Raleigh/Cottle RD.

Major hydraulic connection off site is BC area formed by constriction of Oak Hill and Edenvale Ridge; GW flow converges at v-notched Edenvale Gap making plume less wide but traveling at faster rate; layered hydrogeology of Region I changes to more homogeneous condition N of Branham Lane; separate aquifer characteristics noted.

Shallowest groundwater (GW) = 7.5 ft, Boring 7, 3/22/79.

Aquifer	shallow	deep	BC
GW gradient (ft/ft)	.002-.007	.002	.005
Direction	SW	NW	N-NW
Velocity	10 ft/yr	4.4 ft/day	
Cnductivity	.007-20ft/d	.16cm/sec	
assumed porosity	.2	.2	

Transmissivity at B, C, BC aquifers:

20 sq ft/min	MW 15,16,24,29
60-80 sq ft/min	sites 25,30,31
100-200 sq ft/min	sites 33,34

NW flow induced by artificial recharge facilities along Coyote Creek, recharge ponds along Guadalupe River, and basin geology.

Boring logs for all 326 MW not located.

Attachments: #10 - Map of on-site A,B,C aquifer connection
#11 - Shallow/Deep Hydrogeologic Data, 7 pgs
#12 - BC/Edenvale Gap Map and Hydrogeologic Data, 3 pgs

C. Contamination

See Risk Assessment Chemical Properties: Questions 1,2,3,4

1978 IBM initiated site GW monitoring.

Part I: Bldg Specific Contamination

1. Bldg 001-Tank Farm

10/80 IBM reported leak from underground pipes Bldg 001-Tank Farm

ppb	soil (5ft)	GW
Acetone	106,000	530,000
Petroleum naptha	2,600,000	1,000,000
Isopropyl alcohol	350,000	800,000
Xylene	90,000	90,000
Ethyl amyl ketone	85,000	30,000
Isophorone	ND	240,000
1,1,1-TCA	ND	270,000
Kerosene	ND	1,000,000

1/82 Report shows detection of Kerosene in soil = 12,000,000 ppb and "unknown solvent" (ppb) = 300,000 soil, 1,100,000 GW; Water samples from contaminated boring showed higher levels of contamination.
2/85 Facility response to Risk Assessment Summary believes unknown solvent = Phthalate ester.

Monitoring wells installed; 1st sample 2/82 =
Freon-113 65 ppb TCA 134 ppb

Excavation of soil: 10/80 = 4000 cu yds; 5/81 = 7000 cu yds
Dimension of soil contamination: ~60 ft E-2 to E-6, Isophorone and "unknown solvent"; original complete boring data not located. Extent of excavation = ~150 ft long x 50 ft wide x 30 ft deep

Extraction well operating 10/82.

Attachments: #13 - Bldg Site Location Map
#14 - Leak Data, 4 pgs
#15 - Contamination/Excavation Data, 7 pgs

2. Bldg 100 - Chromic Acid Waste Tank

Abandoned ~1979.
9/81 soil and GW sampling for organics and inorganics at site. Original data results nor located; Correspondence 3/10/82 =
GW organics: PN 10,000 ppb
inorganics: Chromium above drinking water std 0.05 mg/L
soil organics: data not located
inorganics: Chromium (Cr), Phosphorous, Nitrate-N, Floride

Dimension of soil contamination: ~200 ft Boring 2 to 20, Cr.
Excavation of waste tank and soil completed 5/18/82, 343 cu yds.

Attachments: #16 - Bldg 100 Contamination Information, 8 pgs

3. Bldg 001-Underground Waste Tanks

Facility response 2/85 to RA Summary believes data does not refer to these waste tanks.
Information taken from IBM reports (Attachment #17) and appeared to be separate from Bldg 001 Tank Farm info (Attachment #15).

11/81 soil and water sampling around 3 buried tanks scheduled for excavation detected contamination; 12/81 analytic results =

ppb	soil	water(extracted)
Acetone	5,000,000	220,000,000
PN	19,000,000	3,300,000
1,1,1-TCA	3,300,000	38,000
Isophorone	150,000	ND
IPA	ND	2,000,000
Xylene	ND	3,000
EAK	ND	1,500
Kerosene	ND	560,000

Shallow water table depth ~25 ft.

Report 3/10/82 states GW analysis = no organic contaminants.
Shallow A aquifer extraction well A-22 installed 5/82 to depth 41 ft; extraction well A-17, 42 ft, started 9/83.
Report 7/28/82 detected >10 chemical contaminants.

Kerosene detected in soil 7,600,000 ppb, 13.5 ft.
Dimension of soil contamination: ~140 ft + Boring 1 to 11, PN and Isophorone.
Source = most likely small quantity tank overfills and/or leakage from the tank vents.
Excavation of 3 tanks 6/84 with 400 cu yds soil (54x11x12); additional excavation measured 15x15x18 ft.

Attachments: #17 - Bldg 001 Waste Tank Data, 11 pgs.
Facility Response 2/85 to RA Summary

4. Bldg 014 - Sump

1/82 holes detected in side walls of sump; soil & GW sampling for organics and inorganics done:
GW (ppb) = Freon-113 2900; TCA 22; Chloroform 1.2
Soil (5 ft) = Total Chromium 600,000; no organics detected.

Sump excavated 3/83; not replaced. Soil samples after excavation detected Freon-113 18 ppb, TCA 1 ppb; no inorganics detected above "background" levels.

Attachment #18 - Bldg 014 Data, 3 pgs

5. Bldg 025 - Ink Waste Tank

8/82 Excavation of tank; tank installed 4/76, leaked & repaired. Analysis of Ink Waste during 8/82 excavation identified numerous organics not previously detected; Soil/ GW sampling initiated:

ppb	soil	GW
Ink	160,000	90,000
1,1-DCE	740	40
TCA	38	270

Also detected were Freon-113, TCE, Xylene, Alkyl benzene, Chloroform, Methylene Chloride.
Dimension of soil contamination: ~60 ft, #2508 to #2507.
Additional soil excavation completed 10/82; no further action for this site.

Attachment: #19 - Bldg 025 Data, 9 pgs

6. Bldg 067 - Tank Farm

11/82 Excavation of tanks begun; Tank T-8 showed severe corrosion in pipe elbow near bottom of tank; tank used as mixed solvent waste tank. Tank in good condition. Analysis:

ppb	soil	GW (well T-29)
Freon-113	400,000	36,000
1,1,1-TCA	1,800	1,200
Methylene Chloride	4,000	990,000
Acetone	18,000,000	6,800,000
IPA	6,500,000	130,000,000
N-Methyl-2-Pyrrolidone	86,000	40,000
TCE	75	800
1,1-DCE	2.8	2,300
Chromium	87,000	NA

Initial soil and tank excavation 12/83;
Complete soil excavation scheduled for 4/85.
Dimension of soil contamination: ~88 ft Boring 67-45 to 67-37, Freon-113.

Attachment: #20 - Bldg 067 Data, 11 pgs.
GW concentrations provided by Facility Response to RA Summary 2/85

Part II: General Contamination On/Off Site

Total chemicals detected in soil = >10 GW = >10.

Facility utilizes GW from deep aquifers B,C,D, and deeper in site operations for potable and process requirements; 6 on-site production wells.

Initial contamination thought to be confined to deep aquifer by clay soils but 4/82 plume identified in shallow aquifer = Freon-113 and TCA near Bldg 067;
7/82 report notes detection of TCE in shallow on-site GW.

2/85 on-site well status:
A aquifer - 59 monitoring wells
" - 103 observation wells (piezometers)
" - 11 extraction wells
B aquifer - 25 monitoring wells
" - 5 extraction wells
C aquifer - 13 monitoring wells
" - 1 extraction well
D aquifer - 1 monitoring well

Major contaminants of all 4 aquifers = Freon-113, TCA.
Also detected in all 4 aquifers per 7/84 well summary =
Methylene Chloride 1-20 ppb 1,1-DCE 1-12 ppb

Off-site well sampling of public/private wells initiated 4/82; monitoring wells installed 7/82

2/85 off-site well status:
Region I A aquifer - 11 monitoring wells
B aquifer - 26 monitoring wells
" - 1 extraction well
C aquifer - 28 monitoring wells
" - 1 extraction well
BC aquifer - 11 monitoring wells
" - 2 extraction wells
D aquifer - 5 monitoring wells
Private Wells - 8
Public Wells - 0

Region II Private Wells - 5
Public Wells - 8

Historical Summary Data for all monitoring wells submitted 7/84.

Designation of monitoring areas:
Region I - eastern edge plant site to Edenvale Gap, ~23,000 ft
Edenvale Gap = Hillsdale/Capital Expressway,
Capital Expressway/Monterey Highway
Region II - area N of Edenvale Gap to well #70, ~12,000 ft
IBM monitoring to 2.5 miles off-site = to Edenvale Gap.

RWQCB Plume Maps drawn for highest contamination detected and reported in Summary Data 7/84.

Attachments: #21 - RWQCB Plume Maps, 10 pgs
#22 - IBM/HLA Plume Maps, 6 pgs
#23 - Extraction, Observation Wells, 2 pgs
#24 - Well Sampling Frequency, Depth, 9 pgs
#25 - On/Off Site GW Information, 4 pgs

D. Case Chronology

1978 - Harding Lawson Associates (HLA) investigations for IBM.
10/80 - Initial Leak Bldg 001 - Tank Farm reported.
1981 - 1982 On site investigations detected several sources of GW and soil contamination.
4/82 - Off-site plume identification & monitoring begun
6/82 - Facility Questionnaire Completed for RWQCB.
11/82 - NPDES Permit adopted for discharge of effluent from GW clean-up program.
3/83 - David Keith Todd Consulting Engineer evaluation for RWQCB - results consistent with HLA.
10/83 - Kennedy/Jenks Engineers report of Canoas Creek Water Quality before/after extraction system operation - contaminants present both periods.
12/83 - BC/Edenvale Gap hydrogeologic assessment
7/84 - IBM proposal to RWQCB re: Region I plume containment and Region II plume monitoring.

E. Current Status

12/84 - IBM submitted Comprehensive GW Management Program; RWQCB public hearing on issuance of permit for Waste Discharge Requirements for Hazardous Materials Clean-Up
2/85 - RWQCB voted not to refer IBM to Attorney General
12/86 - IBM to submit comprehensive GW management program per terms of above permit.

F. References

1. Harding Lawson Associates reports 11/80, 10/83.
2. David Keith Todd report 3/83
3. Kennedy/Jenks report 4/83, 8/83
4. IBM reports to RWQCB (attachments)
5. RWQCB Summary Report
6. IBM Facility Response to Risk Assessment Summary

UNITED TECHNOLOGIES (UTC) Site #: OG 12
1050 E. Arques Ave, Sunnyvale File Name: UTC

Reviewed: 4/84; 12/84 Reviewer:LAP/MCT

A. Description of Site

UTC has owned and operated this 23 acre site since 1963. The site is used for research and development and for small scale testing of rocket propellants. The process involves small quantities of solvents for general degreasing. (1)

Hewlett Packard (HP) has purchased and is developing a 10 acre parcel on the west side of the property adjacent to its 947 E. Arques Ave facility. Two buildings are on this parcel: a Research Lab bldg. (Bldg 5200) and a testing bldg. (Bldg 5400). (1)

There are no chemical storage tanks at this site. The following chemicals are used on this site (1):

- 1,1,1-TCA
- Trichloroethylene
- Freon 113
- Toluene
- Methyl Ethyl Ketone
- Hydrochloric acid
- Magnesium
- Ethyl Acetate
- Methyl Isopbutyl Ketone
- Methylene Chloride
- Sulfuric acid
- Nitric acid
- Ammonium Perchlorate
- Chromium

Solvents are stored and dispensed from 55 gal drums, mostly in outside areas around the Lab bldg. Acids are stored in 1 gal and 55 gal containers and used inside bldgs. (1)

No Facility Questionnaire submitted. 3 underground acid neutralization vaults (3), 1 acid dilution tank located on site (1).

Attachments: #1 Site Area Maps
#2 Site Maps

B. Geology

Shallow deposits beneath the site are characterized by numerous, discontinuous tabular units of sand and gravel which are interlayered with silt and clay (1).

16 borings; deepest = 49.5 ft.

Soil classification per Risk Assessment Question #!!.

Attachments: #3 Boring Logs
#4 Geologic Cross-sections
#5 Summary of Boring/Monitoring Well (MW) construction data

Hydrogeology

There are no widespread continuous aquifers beneath the site (1). One aquifer layer defined. "A" aquifer from 10 to 40 feet (1).

11 MWs; deepest = 48.5 ft

Shallowest groundwater (GW) 8.5 ft (2). GW flow N-NE, gradient 0.38%, flow velocity 0.5 to 1.0 ft/day. There is a localized cone of depression and change of general flow direction near Lawrence/Central Expressway interchange, possibly caused by a sump located in the area (1).

Hydraulic conductivity ranges from 0.012 to 0.0081 cm/sec; estimates of vertical hydraulic conductivity range from e-5 to e-9 cm/sec (1).

Potentiometric surface of lower aquifer system is approximately 80 ft lower than for the shallow system. There appears to be significant thichness of low permeability soils which serve to hydraulically separate the water-bearing units in the deep zone from the shallow zone (1).

3 municipal wells are located near the site area (1).

Attachments: #6 GW elevation data
#7 Data on nearby municipal and private wells

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

For chemicals used on site: 1,1,1-TCA, TCE, Freon 113 detected in both soil and GW; Methylene Chloride detected in soil only.

Soil contamination - 7 chemicals. Major contaminants:

TCE	4,689 ppb
1,2-DCE	<3,875 "

GW contamination - 9 chemicals. Major contaminants:

1,2-DCE	9,440 ppb
1,1,1-TCA	1,775 "

GW contamination thought to be primarily from offsite sources (1,2), in part due to relatively high contamination of upgradient wells. No clean wells on site - plume not well defined.

Upgradient sites: National Semiconductor
Downgradient sites: MMI, TRW

Attachments: #8 Lab Results - GW
#9 " " - Soil
#10 Contamination Map

D. Case Chronology

Hewlett Packard conducted a subsurface investigation to collect baseline data before possible purchase of this site (1). No Facility Questionnaire was received.

12/82	Subsurface investigation by Woodward Clyde Consultants completed. 13 Borings/8 MWs constructed. Findings: GW and soil contamination.
1/20/83	RWQCB letter stating additional investigation may be required.
4/11/83	DME notifies HP that the former UTC site may require some subsurface investigation (File # 1220.03).
7/19/83	RWQCB receives preliminary plan of action for soil & GW quality study on 1050 E. Arques site by J.V. Lowney & Associates
8/83	Upon sale of this property to HP, UTC removed all residual hazardous materials from this site in August 1983 (c).
8/1/83	RWQCB receives letter from UTC noting that GW elevation survey would be conducted the week of Aug. 1.
8/3/83	Subsurface investigation completed by J.V. Lowney & Associates. 3 Borings/MWs constructed. Findings: GW contamination only, with highest levels in upgradient well.
9/16/83	RWQCB receives GW elevation survey from UTC
12/1/83	RWQCB receives new sampling from 1050 E. Arques site. These include tests of liquid from acid neutralization tanks and from soil underneath tanks sampled after excavation. Upon sale of property to HP vaults cleaned and concrete-filled. 290 ppb of 1,2-DCA detected in one of the soil samples. (Comment: Analysis of the soil under these pits indicate the pits remained intact until they were removed in early 1984 as part of the demolition on the premises)
4/24/84	RWQCB receives notification that HP has begun construction on site. Wells 1 & 2 were unable to be maintained due to conflicts with construction on site; wells 7,13, 14A, 14B, 15A and 15B will be maintained.

Attachment: #11 HP Letter 4/17/84

E. Current Status

No further investigation is being required or performed at this site with the exception of well maintenance.

F. References

1. Woodward Clyde Consultants report 12/84
2. J.V. Lowney & Associates report 8/83
3. UTC tank and soil analyses 11/83
   Misc. Correspondence

Signetics
740 Kifer Rd, Sunnyvale

Site #: OG 13
File Name: Sig740K

Facility: 1 bldg
Date Reviewed: 6-19-84

Reviewer: LK

A. Description of Site

No info re: length of occupancy, previous use of site.
Manufactures printed circuits.

1 2000 gal underground vaulted waste solvent tank; installation date not given.
3 underground primary waste treatment tanks; installation date not given, rebuilt 1980/81; 450,000 gpd capacity

Site historical data review located abandoned and filled underground waste treatment unit south side of facility.

Chemicals on site: 1,1,1-Trichloroethane, Methanol, Acetone, Ethylene glycol, Xylene, N-butyl acetate, Isopropyl alcohol(IPA), Hexamethyldisidazone, Freon-TF, Developer KTRF, KTI Photoresist, Shipley thinner, J-100 stripper, A40, Burmar 712.

Composition not specified for: "J-100", "A40", "Burmar 712", "Developer KTRF", "KTI Photoresist", Shipley thinner.

No hazardous wastes received since 10/81; facility closed 6/82; Tank removed by 6/83. Site subleased to Telmos early 1983.

Attachments: #1 - Site Location Maps, 2 pgs
#2 - Facility Map
#3 - Facility Questionnaire/Chemicals On Site, 6pg

B. Geology

Original EMCON report with site stratigraphy not located.
6 borings converted to GW monitoring wells;
8 additional soil borings on site, located W and S of bldg.

Soil Classification per Risk Assessment Question # 11.

Attachment: #4 - Boring Logs, 19 pgs.

Hydrogeology

6 GW monitoring wells. Two aquifers defined:
A - depth 15-17 ft
B - depth 18.5-23 ft
Shallowest GW = 15 ft at S-9A
GW flow direction = A aquifer - N,NE B aquifer - W
GW = 0.02 ft/ft Calculated from data:
S-9A to S-10A distance = 100 ft elevation = 47.8-49.9 ft

Surface runoff is toward street N side of building. 4 storm drain manholes located on facility; surface runoff is sloped into storm drain (to Calabazas Creek).

C. Contamination

See Risk Assessment Chemical Properties Question 1,2,3,4.

Total chemicals detected: soil = 6 GW = 6

Leak detected on site before 4/82 from underground waste solvent tank and area of abandoned treatment unit.
Soil and GW contaminated.

Chemical contaminants per aquifer (ppb):
A - TCE 1400 at S35 located SE corner of property; GW direction N indicating source of contamination off site; no MW off site N of property line to define extent of plume.
B - Benzene 2100 at S10 located N of waste neutralization system; GW flow is W.

Other Signetics facilities around 740 Kifer with contamination:
730 Evelyn (SigTotal file); upgradient
TCE 1500 ppb A aquifer; no data on B aquifer.
GW flow direction NE

860 Kifer (Individual file); slightly upgradient and West
TCE 2500 ppb A aquifer
Trans- 1,2-DCE 1700 ppb, Benzene 1100 ppb B aquifer
GW flow directions A = E-NE and B= N-NE (these differ from 740 K directions).

6/82 GW Clean-up Program proposed;
9/83 Extraction Wells A1, B1 installed; GW extracted and treated by passing through carbon towers.
GW analysis initially included VOA, BNA, and Bioassay then limited to TCE, PCE, and 1,1,1-TCA quarterly.

Soil contamination 2 major sites:
  S13 - SE corner of property; site of highest GW contamination;
  S12 - S of waste neutralization unit.

Major contaminants of soil (ppb):

Dichloromethane	110	Toluene	74	TCE	34

Attachments: #5 - Leak Notations per Signetics Correspondence and NPDES Permit 4/83, 11 pgs
#6 - RWQCB Plume Maps A and B Aquifer, and Soil
#7 - Soil and GW Data, 14 pgs

D. Case Chronology

4/82 Leak on site, details not located
- Phase I Investigation by EMCON Associates
  Findings - soil and GW contamination
  Original report not located.
6/82 Clean-up program for soil and GW proposed
4/83 NPDES Permit granted
6/83 Facility Questionnaire completed
  Tank (presumably waste solvent tank) removed by 6/83
  Site closure per Cal DHS approval
  Site subleased to Telmos
9/83 GW Extraction Wells installed

E. Current Status

10/83 Bioassay = 100% survival
3/84 GW effluent (ppb) TCE=5 PCE=1 111TCA <1
  Flood Control Channel all <1.
Quarterly GW monitoring.

Attachments: #8 - Bioassay and GW Effluent Reports, 3 pgs
#9 - Signetics Correspondence re: Monitoring, 3 pg

F. References

EMCON original report not located.
Facility Questionnaire (Attachment #3).

Signetics
100 San Lucas, Sunnyvale — Site #: OG 14
(formerly 860 Kifer Rd, Sunnyvale) — File Name: Sig860K

Facility: 1 bldg
Date Reviewed: 6-19-84;11/84 — Reviewer: LK

A. Description of Site

Building leased from Barres-Hinds for Signetics since 1973; no information re: operations on site.
Fiberglass company prior occupant.

1 underground treatment unit, 12 ft below grade.

Chemicals used on site: Not Specified
However, Facility Questionnaire notes "Cassion filled with soil - chemical analyses reveals traces of TCE, PCE, TCA."

Attachments: #1 - Site Location Map
#2 - Facility Map
#3 - Facility Questionnaire, 4 pgs

B. Geology

Facility underlain by silty clays, with sand- gravel and sandy-silt lenses.

Soil Classifications per Risk Assessment Question # 11.

Attachment: #4 - Boring Logs, 8 pgs

Hydrogeology

4 GW monitoring wells. Two aquifers defined:
- A - depth 15-17.5 ft
- B - depth 16.25-19.5 ft

Shallowest GW = 15ft at S-8A
GW flow direction = A aquifer - E,NE B aquifer - N,NE
These GW flow directions different from 740 Kifer report
GW gradient - .004 ft/ft, calculated from data:
S19A to S32A; distance = 425 ft elevation = 51.5 - 53.5 ft

These GW flow directions different from report for 740 Kifer Rd.

(Information from boring logs and plume maps.)

C. Contamination

See Risk Assessment Chemical Properties Questions 1,2,3,4.

Total chemicals detected: soil - not analyzed GW = >10

Chemical contaminants per aquifer (ppb):

A - TCE 2500 at S19
S19 located SW corner of property in area never used to store chemicals.

B - Trans-1,2-DCE 1700 and Benzene 1100 at S8 only

City of Sunnyvale well and water storage tank 350 ft West of S19.

8/83 GW wells S31 and S32 destroyed by owner of property to make parking lot.

11/84 New monitoring wells drilled to replace destroyed wells
(logs pending)

Other Signetics facilities around 860 Kifer with contamination:

730 Evelyn (SigTotal file), upgradient
TCE 1500 ppb A aquifer; no data on B aquifer
GW flow direction NE (towards 860 Kifer).

740 Kifer (Individual file), slightly downgradient and West
TCE 1400 ppb A aquifer, Benzene 2100 B aquifer
GW flow direction A = N-NE and B = W (away from 860 K
but these directions differ from 860 K report.)

Attachments:
#5 - RWQCB Plume Maps, A and B Aquifers 2 pgs
#6 - GW Data, 5 pgs
#7 - Signetics Correspondence re: S19

D. Case Chronology

4/82	Site specific evaluation by Signetics following leak investigation at 740 Kifer.
4/82	Phase I Investigation by EMCON Associates Findings - GW contamination soil not analyzed
6/83	Facility Questionnaire completed
8/83	GW wells S31 and S32 destroyed to make parking lot
11/84	New monitoring wells drilled to replace destroyed wells

E. Current Status

9/83 Quarterly GW monitoring for TCE, PCE, 1,1,1-TCA

Attachment: #8 - Signetics Correspondence re: Monitoring 3 pgs

F. References

EMCON GW data. Original report not located.
Facility Questionnaire (Attachment #3).

MEMOREX CORPORATION
1200 Memorex Drive
Santa Clara, CA 95052

Site #: OG 15
File Name: Memorex

Date Reviewed: 10/17/84

Reviewer: MCT

A. Description of Site

Memorex manufactures computer tape at this facility. Memorex bought site in early '60s - prior use as orchard (RKM memo 5/22/84). Memorex facility constructed in 1965 (SWRCB memo 11/17/82).

Buried chemical tanks located at four locations along west side of Memorex building complex. Site contains (Attachment #3):

- 12 non-vaulted storage tanks containing Cyclohexanone, Methyl Ethyl Ketone (MEK), Isopropanol (IPA), Acetone, and Diesel
- 3 non-vaulted tanks containing waste solvent and waste water.

Memorex says information on tanks not current but does not provide current information (c).

Xylene not used at plant since 1973 (2).

Attachments:	#1	Site Location Map
	#2	Site Maps
	#3	Facilities Questionnaire

B. Geology

Soil profile mostly silty clay with significant layers of fine sand from 15-25 ft. and sand & gravel from 75-85 ft.

13 borings; deepest 90 ft.

Soil classification per Risk Assessment Question #11.

Attachments:	#4	Boring Logs
	#5	Soil Profiles

Hydrogeology

2 Aquifer layers defined.

"A" aquifer found 14.5 to 29 ft. below ground surface. It is a continuous gravelly sandy zone with a shallower thin discontinuous silty water-bearing layer found several feet above. Hydraulic continuity exists between these two shallow water-bearing zones. "A" layer underlain by ~45 ft. of silty clay to clayey silt. (2)

"B" aquifer (Boring B-9) 76-85 ft. below ground surface (2).

"A" aquifer data: Shallowest Groundwater (GW) ranges from 10.44 (2) to 6.69 (3) ft. (GW levels 4-5 ft. higher in Phase III study when compared with Phase II data). Average Transmissivity - 1 ft2/min (range 0.5-2.5). Average Storativity - 0.02 (range 0.002 to 0.16). Hydraulic Conductivity - 0.1/ft/min. Average Porosity - 25%. GW Gradient - 0.1% to the Northeast. Velocity - 0.6 ft/day. (3) Vertical seepage velocity 0.013 ft/day (2).

Only one deep well - little "B" aquifer data.

12 Monitoring Wells (MW); deepest 90 ft.

Attachments: #6 GW elevation map

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: MEK, cyclohexanone, acetone detected in GW and soil, IPA detected in GW only.

Soil contamination - 3 chemicals. Major contaminants:

Cyclohexanone	12 ppm
MEK	5.4 ppm

Soil sampling limited - only MEK and Cyclohexanone tested at 5 wells - Acetone, IPA, and Cellosolve Acetate at 1 each. Soils showed no contamination except for well M-3 (12 ppm Cyclohexanone, 5.4 ppm MEK) but depth of soil sampling above bottom of tanks at 9-9.5 ft. (RKM memo - 5/22/84)

GW contamination - 10+ chemicals. Major contaminants:

MEK	5613 ppm
Cyclohexanone	885 ppm

Limits of detection were relatively high - 50 ppb for Cyclohexanone, Acetone, IPA & MEK and 10 ppb for Toluene and Xylene. No contamination found in "B" aquifer. (2) 1,1-DCE, Freon 113, TCE, TCA, DCA detected in GW but Greg Fischer of Memorex claims these were never used on site (SWRCB memo 11/17/82).

Sampling from pumping well indicates that the zone of highest contamination is not centered in the area of the well adjacent to tanks but probably somewhere downgradient beneath the plant (3). Greg Fischer of Memorex contends that the center of contamination beneath the plant is due to GW movement rather than the source being under the building and that the source of contamination is due to overfilling of tanks rather that any leakage (RKM memo 5/22/84).

Well #12 installed N-NE of site shows no contamination (c).

SCVWD notes 2 deep irrigation wells in vacinity, 1 each on East and West side of Memorex property - no information on any sampling in file. Memorex says that deep wells on memorex property were sealed "a long time ago" (c).

Prescence of anaerobic bacteria in wells M-3, M-4, & M-5 suggests potential for biodegradation of contaminants such as cyclohexanone and MEK (3).

Facilities downgradient (DG) - Pacific Nursery Pots, Technical Coatings, Monsanto, Container Corp. of America, Owens-Corning, Precision Monolithics, and Fairchild. Closest facility DG to show similar contamination Technical Coatings - 12 ppm MEK but GW sample from well adjacent to tank which contains MEK.

Upgradient neighbors are residences, not industrial sites.

Attachments: #7 Lab Results Summary 5/84
#8 Lab Results 9/82
#9 RWQCB plume maps
#10 Pump test potentiometric surface maps

D. Case Chronology

<NOTE: See Attachment #11 for Memorex case chronology>

Leak detection program 1982

5/26/82	Facilities questionnaire completed.
9/17/82	Phase I subsurface investigation by Harding-Lawson Associates completed. 7 Borings/MWs constructed. Findings: Soil & GW contamination detected.
11/17/82	SWRCB memo with comments on Phase I report.
1/4/83	Phase II subsurface investigation by Harding-Lawson Associates completed. Findings: Further defining of plume, hydrogeologic data.
5/13/83	SWRCB memo with recommendations for additional investigation.
4/16/84	Phase III GW hydrogeologic investigation by Harding-Lawson Associates received by RWQCB. 1 GW extraction well installed. Findings: Pump test successful in extracting contaminants from GW.
5/22/84	RKM report of inspection of Memorex facility. Findings: see above
6/11/84	RWQCB letter informing Memorex of NPDES permit requirement due to pumping.
9/10/84	Memorex progress report on extraction and monitoring recieved by RWQCB. Findings: No contamination except for wells #4 & #5 (adjacent to extraction well) and <1 ppb of 1,1-DCA and 1,1,1-TCA in MW#8.
9/21/84	Greg Fischer of Memorex calls RKM to inform Board that San Jose-Santa Clara Water Pollution Control Plant is not allowing discharge of extracted GW to sanitary sewer and requests variance to discharge to storm sewer system to Guadalupe River until an NPDES permit can be obtained.
10/1/84	RWQCB draft letter OKs discharge to storm sewer while NPDES permit being processed.

E. Current Status (as of 10/17/84)

Ongoing Phase III.

F. References

1. Harding Lawson Associates Phase I report 9/82
2. " " " Phase II report 1/83
3. Harding Lawson Associates Phase III report 4/84
4. Memorex monitoring progress report 5/84

   Misc. Correspondence

INTEL CORPORATION
3065 Bowers Avenue
Santa Clara, CA 95051

Site #: OG 16-17
File Name: Intel

Facilities: Intel Magnetics
3000 Oakmead Village Dr.
Santa Clara, CA

Santa Clara III Facility
2880 Northwestern Parkway
Santa Clara, CA

(Intel Magnetics (IM) site is located 1/2 mile NW of Santa Clara III (SC3) site.)

Date Reviewed: 10/19/84

Reviewer: MCT

Description of Site

Intel Magnetics is a magnetic bubble memory fabrication plant. Intel has occupied site from late 1978 to the present. The site is leased. The Santa Clara III facility was built about 1976 and occupied from 1976 to the present. It is used as a test and assembly facility and includes a small tin plating line. (c)

Intel Magnetics (MAG) has 1 concrete sump (acid neutralization system) and 1 non-vaulted waste tank containing 70% water, 24% Isopropanol and less than 1% each of the following chemicals: N-butyl Acetate, Hunt Developer (Isodecane C11 & C12), Acetone, Xylene, Solids (Polymer Solids from photoresists) and others (unknown). The latter tank was installed in 1978 (2).

The Intel Santa Clara III facility (SC3) has 1 non-vaulted diesel tank and 1 vaulted neutralization tank for sulphuric, nitric, hydrochloric, acetic, and phosphoric acid. The latter tank was installed in 1976. Although it is supposedly a neutralization tank accidental dumping of solvents into the tank have occured in the past; on several occasions the tank has overflowed into the vault (2). Overflows occurred prior to 1980 (c).

Substances used at both sites:

- Acetone
- Freon TF (Freon 113)
- Freon TE
- Freon 14
- N-butyl Acetate
- Methanol
- Isopropanol
- TCE
- TCA
- Isodecane
- Ethylene Glycol
- Xylene

Photo-resist (xylene with 10% polymer solids)

712-D Stripper (EKC Chemical Co., contains phenol, sodium dodecyl sulfonate, various unknown aromatic hydrocarbons in a carrier solvent of 1,2,4-trichlorobenzene) last used in 1979. (2) This chemical used only at MAG facility (c).

Attachments: #1 Site Location Map
#2 Site Map

#3 Facilities Questionnaire - MAG
#4 " " - SC3

B. Geology

Unconsolidated sediments in upper 50 ft. are laterally discontinuous, with fine-grained materials of relatively low permeability predominating. Shallow zone consists of unsaturated sediments with some perched ground water and is separated by underlying zones of silt- and clay-rich deposits from the aquifers that are used for water supplies in the area. (3)

16 Borings: 9 at MAG (deepest ~45.5 ft.), 7 at SC3 (deepest 45 ft.)

Soil classification per Risk Assessment Question #11.

Attachments: #5 Boring Logs
#6 Soil Profiles - MAG
#7 " " - SC3

Hydrogeology

2 aquifer layers have been defined but there seems to be communication between them. The "A" aquifer is estimated to be from 12-20 ft. at MAG and from 15-30 ft. at SC3; the "B" aquifer is estimated to be from 30-40 ft. at MAG and from 36-39 ft. at SC3 (MCT).

Shallowest Groundwater (GW): 4.6 ft. at MAG, 5.24 ft. at SC3. "A" layer gradient flows northeast with a gradient of 0.002 at MAG and 0.006 at SC3. "B" layer (GW at 40 ft. at well SC3-4) flows west-northwest with a slope of 0.01 ft/ft. This lower zone may or may not merge with the shallow zone near the northwest edge of the property. (3)

3 creeks affect surface and subsurface drainage at the sites: Calabazas, Saratoga, and San Tomas Aquinas Creeks. Saratoga Creek has been backfilled and probably continues to be a subsurface drain. Both sites are within 1/4 mile of this channel. Therefore, GW with levels higher than the channel (~15 ft.) will tend to flow toward it. (3)

Piezometric head of GW in shallow zone progressively higher with increasing depth - indicative of a GW discharge area. Because sites are in or near a GW discharge area, the water levels in wells that barely penetrate the saturated zone are lower than in wells that are 20' deeper. At Intel the differential is ~1 ft. in 20 ft.; at SC3 the differential is as much as 4 ft. in 20 ft. (3)

16 Monitoring Wells (MW): 9 at MAG (deepest ~45.5 ft.), 7 at SC3 (deepest 45 ft.).

Attachments: #8 MW and hydrogeologic data

#9 SCVWD well data

C. Contamination

See Risk Assessment - Chemical Principles: Questions 1,2,3,4.

For chemicals used on site: Trichloroethylene (TCE), Freon 113 detected in both soil & GW, 1,1,1-Trichloroethane (TCA) detected in GW only at SC3; TCE detected in soil and GW, TCA, Acetone, Freon 113 detected in GW only at MAG.

Soil contamination - 10 chemicals (MAG), 7 chemicals (SC3).
Major contaminants:

MAG		SC3	
Trichlorobenzene	89 ppm	Hexane	1,400 ppb
Freon	1.7 ppm	TCE	48 ppb

GW contamination - 10+ chemicals. Major contaminants:

MAG		SC3	
TCA	220 ppb	TCA	550 ppb
Acetone	140 ppb	TCE	490 ppb

Source of contamination at MAG believed to be caused by overflow periodically in 1980-81. Seams were found in the vault of the acid neutralization system at SC3 through which waste overflow would leak (RWM memo 7/30/84 - see Attachment #15). SCIII vault was repaired and lined and the neutralizing system was replaced with a new system. Intel's solvent management plan is now in place (Clean Water Act - metal finishing pretreatment standards) and no solvent has been detected in wastewater (c).

IM site completely paved except for peripheral planter strip and 20' triangular shaped planter area directly behind "shop" area. Proximity of planter to "shop" area with absence of tanks upgradient led RKM (memo 5/4/84) to conclude planter box disposal of chemicals likely since MW near planter had contamination as high as near the tank.

Concentrations of organic solvents have increased since MWs were sampled in 1982, indicating that the plume is probably expanding (3). Low level contamination in lower aquifer in latest round of sampling (80 ppb TCA in SC3-4 well at 40') (RKM memo 5/4/84).

Source of Trichlorobenzene in soil from SC3 tank backfill. Concentrations detected (33-89 ppm) may be limited to soil above tank. Freon also detected in soil above SC3 tank backfill at 1.7 ppm. No GW contamination for Trichlorobenzene yet. (RKM memo 5/4/84)

No contamination from upgradient direction indicated (3).

Avantek, Applied Materials, Magnetic Peripherals, 3300 Scott Blvd. site (formerly Sperry, now HP), and Intel Fab-2 facility in area. No file available for Intel Fab-2 (upgradient site). (for locations of sites, see Attachment #14)

Attachments: #10 Lab Results - Phase III (with summaries of Phase I and II results)
#11 Phase I Lab Results
#12 Earth Science Associates plume maps
#13 RWQCB plume maps - site
#14 " " " - site area

D. Case Chronology

Leak detection program 1982

6/16/82 Intel Magnetics Facilities Questionnaire completed.

8/24/82 Phase I subsurface investigation for both sites by Weiss Associates completed. 2 Borings/MWs constructed (1 at each site). Findings: Soil and GW contamination detected.

9/21/82 Facilities Questionnaire for SC3 received by RWQCB.

3/83 Phase II subsurface investigation by Weiss Associates completed. 6 Borings/MWs constructed (3 at each site). Findings: VOCs in unsaturated soil restricted to areas adjacent to suspected sources. Neither site had organic chemicals migrated to lower zones of aquifer but some had migrated laterally in the shallow GW.

1/84 "Phase III" subsurface investigation by Earth Science Associates completed. 8 Borings/MWs constructed (5 at MAG, 3 at SC3). Findings: Further definition of plume, hydrogeologic data.

5/4/84 RKM memo from site inspection on 5/1/84.

5/7/84 RWQCB received SCVWD letter with data for wells in vicinity of sites (Attachment #9).

6/84 Proposed Remedial Action Plan by Daniel Sokol completed

7/30/84 RWM memo of telephone conversation to Bryan Rector of Intel commenting of suspected sources of contamination.

8/8/84 New MW analysis from Intel received by RWQCB.

8/13/84 RWQCB letter to Intel with revisions to proposed Remedial Action Plan.

Attachments: #15 RWM memo 7/30/84

E. Current Status (as of 10/19/84)

Ongoing Phase II

F. References

1. Weiss Associates Phase I report 8/82
2. " " Phase II report 3/83
3. Earth Sciences Associates "Phase III" report 1/84

DYSAN CORPORATION
5301 Patrick Henry Drive
Santa Clara, CA 95050

Site #: NA 22; OG 18,19
File Name: Dysan-C

Facilities: 5200 Patrick Henry Drive (OG 19)
5301 Patrick Henry Drive (NA 22)
5440 Patrick Henry Drive (OG 18)

Date Reviewed: 10/4/84

Reviewer: MCT

<NOTE: On attachments use following key: * - in comprehensive packet as well as individual facility files, ** - in individual facility files only, *** - in comprehensive packet only.>

A. Description of Site

Manufacturer of computer disks. No information on length of occupancy, prior occupants or use in file.

Facility Questionnaire data:

5200 Patrick Henry Drive
- 5 non-vaulted non-waste storage tanks. 2 tanks contain #2 fuel oil; 1 tank contains Methyl Ethyl Ketone (MEK); 2 tanks never put in service (c).
- 1 non-vaulted MEK waste storage tank.

Fuel tanks and solvent tanks in separate areas on site.

5301 Patrick Henry Drive
- 6 non-vaulted non-waste storage tanks. 2 tanks contain #2 fuel oil; 4 tanks never put into service (c).
- 1 non-vaulted waste storage tank never put into service (c).

5440 Patrick Henry Drive
- 3 non-vaulted non-waste storage tanks containing #2 fuel oil and MEK.
- 1 non-vaulted MEK waste storage tank.

Calabazas Creek runs adjacent to bldgs. 5440 and 5200.

Attachments: #1 Site Location Map*
#2 Site Location Map*
#3 Site Map (with Monitoring Well locations)*
#4 Facilities Questionnaires**

B. Geology

Soil Profile predominantly silty clays with some sand and gravel lenses. Only substantial layer of other material in Boring #12 (5440 Patrick Henry Drive) - 0-25 ft. sand.

Number of Borings:
5200 - 21 Borings; deepest 40 ft.
5301 - 8 Borings; deepest 23 ft.
5440 - 18 Borings; deepest 40 ft.
For locations, see Attachment #3.

Soil classification per Risk Assessment Question #11.

Attachments: #5 Boring Logs**

Hydrogeology

One aquifer layer defined. No deep aquifer within 40 ft. depth (3).

Average groundwater (GW) gradients in the area of the 5440 tanks approximately 0.003 ft/ft, and near the 5200 tanks approximately 0.002 ft/ft (2); creek and GW determined to be tidal (5). Direction of GW flow north (2). No information on GW velocity in file.

Shallowest GW: Bldg. 5200 - 5.78 ft.
" 5301 -~7.0 ft.
" 5440 - 6.77 ft.

All borings converted to monitoring wells (MW) - see Geology section for distribution and Attachment #6 for summary of well data.

Attachments: #6 Monitoring Well data summary***
#7 GW contour maps**

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: MEK, cyclohexanone found in GW and soil at Bldg. 5440; MEK only in GW and soil at Bldg. 5200.

No chemicals tested besides MEK, Cellosolve (2-ethoxy ethanol), IPA, and Cyclohexanone.

Soil Contamination:
Bldg. 5200 - 1 chemical: MEK at 0.1 ppm.
Bldg. 5301 - no soil analysis
Bldg. 5440 - 4 chemicals: Major contaminants MEK (200 ppm) and IPA (0.6 ppm).
No soil contamination >10 ft by Bldg. 5200, >20 ft by Bldg. 5440 (3).
GW contamination:
Bldg. 5200 - 4 chemicals: major contaminants MEK (24,300 ppm) and Isopropyl Alchohol (IPA) (45 ppm).
Bldg. 5301 - 1 chemical: IPA (10 ppm).
Bldg. 5440 - 6 chemicals: major contaminants MEK (49,000 ppm) and Cellosolve (1,200 ppm).

High MEK contamination (among others) around Bldgs. 5200 & 5440. Source of contamination at first assumed to be solvent leaks from tanks on Dysan property in area of 5440 & 5200 tanks (RJC memo 5/20/83). Source of contamination later determined to be result of spills at the fill ports at the top of each tank. Also, the seal on the tank gauge is composed of an incompatible material to MEK - this caused the seal to deteriorate, leading to a tank overflow. System currently not in use; tanks emptied and cleaned and waste disposed of in 55 gal. drums. (Attachment #12) Little contamination in area of Bldg. 5301.

Levee wells show no contamination - therefore contamination has not spread under Calabazas Creek (2).

Pump test report showed that extraction wells were effective in containing and removing plume (Memo, RJC 11/83). Plan to pump 3 wells at a rate of 50 gpm. Two are installed, one more is to be done when old tank removed and new vaulted tanks put in. Contamination decreased during pump test 10-50% (see Pump Test Report - Fig. 10-19 and Fig. 20-30 for bldgs. 5440 and 5200, respectively). Area of influence of the recovery wells approximately 100 ft. radius from the wells. (4)

Intersil facility east of Dysan - no overlap of contaminants.

Attachments: #8 Lab Results*
#9 RWQCB plume maps**

D. Case Chronology

<NOTE: For a more detailed case chronology from 6/28/84 - 11/8/83, see Attachment #10>

Leak detection program 1982.

6/23/82	Facilities Questionnaires completed.
8/3/82	Phase I subsurface investigation by IT Enviroscience recieved by RWQCB. 24 Borings/MWs (8 at Bldg. 5301, 6 at Bldg. 5440, and 10 at Bldg. 5200). Findings: GW contamination detected (no soil analysis performed).
8/30/82	Phase IA subsurface investigation completed by IT Enviroscience. Additional Borings/MWs constructed at Bldg. 5440 (six) and Bldg. 5200 (five). Findings: Contamination had not spread >60 ft. to the north and 30 ft. to the south of either tank farm.
10/5/82	SWQCB complains of methods used in Dysan investigation.
10/27/82	IT proposal for defining vertical extent of contamination received by RWQCB.
3/1/83	Report on vertical extent of contamination completed by IT. 2 additional borings, one at each contaminated tank farm dug to 40 ft. - sampling from 10-40 ft. at 5 ft. intervals. Findings: no soil contamination >10 ft. by Bldg. 5200 or >20 ft. by Bldg. 5440.
10/13/83	Pump Test report by IT Enviroscience received by RWQCB.
7/9/84	Case transferred from RKM to RWM.

7/13/84	RKM Phase II Tracking System report notes that 10/12/82 SWQCB memo on 10/6/82 meeting states "the spill point probably was the fill port @ top of each tank". It also notes that all tanks at this time have been taken out of service and cleaned (tanks at Bldg. 5301 have never been put in use).
8/13/84	RWQCB letter delineates mitigation plan.
9/24/84	Dysan letter includes time schedule for implementation of mitigation plan. Dysan has also changed consultants (to McLaren Associates).

Attachments: #10 Case Chronology 6/28/82-11/8/83***
#11 RKM Phase II update 7/13/84***
#12 RWM memo 7/19/84***
#13 RWQCB letter 8/13/84***
#14 Tank Farm clean-up schedule 9/24/84***

E. Current Status (as of 10/4/84)
See Attachment #14.

References

1. IT Enviroscience Phase I report 7/9/82
2. IT Enviroscience Phase IA report 8/30/82
3. IT Enviroscience report on vertical extent of contamination 3/1/83
4. IT Enviroscience Pump Test report 9/14/83
5. RWQCB Phase II Tracking System report 7/13/84
Misc. Correspondence

JONES CHEMICAL COMPANY Site #: OG 21
985 Montague Expressway File Name: JONES
Milpitas, CA

Reviewed 7/6/84; 3/14/85 Reviewer: MCT

A. Description of Site

Facility receives chlorine gas, sulfur dioxide, anhydrous ammonia, various acids and bases and trichloroethane by rail or tank truck and repackages these chemicals into cylinders or drums. Facility also manufactures sodium hyprochlorite and aqua-ammonia and ships these chemicals in tank trucks or drums (Attachment #2). No information on length of occupancy, former occupants or use in file.

No Facilities Questionnaire in file.

Attachments: #1 Site Maps
#2 NPDES Permit

B. Geology

Subsurface profile: 1st 10 ft. sand and gravel with silty clays/clayey silts with lenses of fine sand below. Stratigraphy thought to be laterally discontinuous.

31 Borings; deepest 50 ft.

Soil Classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs
#4 Geologic Cross-Sections

Hydrogeology

No information on range of aquifer layers in file. Shallowest groundwater (GW) ~9 ft. (4).

GW flow W. GW gradient 0.4% at site, increasing in vicinity of Berryessa Creek to ~1.0% (4). Flow rates (assuming 35% porosity and GW gradient of 0.4%) 12 ft/yr using hydraulic conductivity of 0.001 cm/sec and 1 ft/yr using hydraulic conductivity of 0.0001 cm/sec. Range of GW flow 11-30 ft/yr in shallow zone (5).

30 Monitoring Wells (MW); deepest 50 ft.

Berryessa Creek (adjacent to site) intermittant stream that only flows during periods of heavy rain (1). The base of the creek bed lies above the GW table (4). In winter months Berryessa Creek acts as a line-recharge source, creating a temporary hydraulic barrier to the westerly flow of shallow GW (8).

Drainage from the southern portion of the facility is directly to the creek. Drainage from the process areas in the center of the site is to the sump from which water is pumped to a settling tank and acid neutralization tank which in turn is pumped to community sewer system (San Jose-Santa Clara STP). Drainage from the northern portion of the site is directly to the creek, except for the tank area and product transfer area which drains to the treatment system (Attachment #14).

180 wells within 2 miles of site (5). 5 wells <1 mile downgradient of site (West) (Attachment #7). Most used for domestic or irrigation purposes. Wells 100-800 ft. deep except for MWs at Ford and Sierra Chemical (25-30 ft. deep). SCVWD finds 16 supply wells in vicinity. Most are >130 ft. but the shallowest is 77 ft. deep (5).

Attachments: #5 GW Elevation Map
#6 Area of Capture Map
#7 Water Well Location Map

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: TCA only chemical known to be stored on site found in soil and GW; no exhaustive list of chemicals used at facility in file.

Soil contamination - only two chemicals tested for in soil:

TCA	648 ppb
TCE	168 ppb

GW contamination - 14 chemicals. Major contaminants:

TCA	1,800 ppm
TCE	232 ppm

TCA explosion Feb. 2, 1982. Release of 2-4,000 gal solvent - most to creek, some to gravel underlying tank area. IT came in to do emergency cleanup. Initial cleanup involved pumping from storm drain and removal of 280 yd3 of water from creek (creek 200′ West of tank) (1).

Highest contamination at former tank site; secondary concentration along Berryessa Creek. "Solvents that entered the storm drain near the ruptured tank discharged to the creek, infiltrated into the ground and entered the ground water system. Solvents in ground water near the creek are more probably the result of discharge from the storm drain than by migration through the subsurface from the ruptured tank area" (4). "It appears that solvents entered the ground water at two locations: (1) near the ruptured tank, and (2) through the creek bed" (4).

Solvent tanks that were the source of the contamination have been converted to non-solvent uses, i.e. water storage and caustic storage. There is now only one tank used for solvents on the

JONES CHEMICAL COMPANY
985 Montague Expressway
Milpitas, CA

Site #: OG 21
File Name: JONES

Reviewed 7/6/84; 3/14/85

Reviewer: MCT

A. Description of Site

Facility receives chlorine gas, sulfur dioxide, anhydrous ammonia, various acids and bases and trichloroethane by rail or tank truck and repackages these chemicals into cylinders or drums. Facility also manufactures sodium hyprochlorite and aqua-ammonia and ships these chemicals in tank trucks or drums (Attachment #2). No information on length of occupancy, former occupants or use in file.

No Facilities Questionnaire in file.

Attachments: #1 Site Maps
#2 NPDES Permit

B. Geology

Subsurface profile: 1st 10 ft. sand and gravel with silty clays/clayey silts with lenses of fine sand below. Stratigraphy thought to be laterally discontinuous.

31 Borings; deepest 50 ft.

Soil Classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs
#4 Geologic Cross-Sections

Hydrogeology

No information on range of aquifer layers in file. Shallowest groundwater (GW) ~9 ft. (4).

GW flow W. GW gradient 0.4% at site, increasing in vicinity of Berryessa Creek to ~1.0% (4). Flow rates (assuming 35% porosity and GW gradient of 0.4%) 12 ft/yr using hydraulic conductivity of 0.001 cm/sec and 1 ft/yr using hydraulic conductivity of 0.0001 cm/sec. Range of GW flow 11-30 ft/yr in shallow zone (5).

30 Monitoring Wells (MW); deepest 50 ft.

Berryessa Creek (adjacent to site) intermittant stream that only flows during periods of heavy rain (1). The base of the creek bed lies above the GW table (4). In winter months Berryessa Creek acts as a line-recharge source, creating a temporary hydraulic barrier to the westerly flow of shallow GW (8).

5/10/84	Jones letter received with plans for GW treatment system and request to discharge treated GW to Berryessa Creek.
6/8/84	RWQCB letter with interim requirements for GW treatment until NPDES permit goes through.
7/18/84	NPDES application received.
7/30/84	Lab results from Levine*Fricke sampling received (Attachment #8).
8/10/84	RWQCB letter expresses concern over delays in investigation and cleanup (Attachment #15).
8/20/84	Jones letter received explaining delays. Start-up of treatment system expected week of 8/20.
9/14/84	Monthly Status Report by Levine*Fricke. 3 extraction wells on-site, with a 4th to be completed by 9/25/84.
10/17/84	RWQCB letter asking for comments on draft NPDES permit and things to be addressed in October status report. (Attachment #16)
11/21/84	Monthly Status Report by Levine*Fricke. Offsite MWs (#34,35,36) installed and sampled.
11/28/84	NPDES permit signed (Attachment #2).
12/12/84	RWQCB letter with new action requirements (Attachment #17).
1/7/85	Monthly Status Report by Levine*Fricke.
2/1/85	RWQCB letter requiring increased pumping rates and monitoring of receiving water. Action plan to address above required by 2/14/85 (Attachment #18).
2/14/85	Monthly Status Report by Levine*Fricke. 3 Additional offsite MWs (#37,38,39) installed and sampled but no boring logs in file.
3/8/85	JTL memo with survey of wells adjacent to Great Western and Pierce & Stevens by Levine*Fricke, AB 1803 survey by City of Milpitas. Municipal wells in area tested - no contamination.

E. Current Status (as of 3/14/85)

Ongoing Phase III

Attachments: #19 Proposed Work Schedule

References

1. IT Enviroscience Preliminary Report 3/82
2. IT " Interim Report 6/82
3. IT " " " (#2) 9/82
4. "Phase I" GW Assessment by Woodward-Clyde Consultants 2/83
5. Phase II GW Assessment by " " " 7/83
6. Phase III proposal by Levine Fricke Consulting Engineers 1/84
7. Monthly Status Report by Levine*Fricke 11/84
8. " " " " " " 2/85

MONOLITHIC MEMORIES
2175 Mission College Blvd.
Santa Clara, CA 95050

Site #: OG 22
File Name: B:Monolith

Date Reviewed: 9/19/84

Reviewer: MCT

Facility: No information

A. Description of Site

No information on current operations, length of occupancy, previous occupants or use in file.

Underground tanks include:

- 2 non-vaulted storage tanks
- 3 " " waste tanks
- 5 vaulted treatment tanks

The above were new units set to begin operations after baseline study done (6/82).

Attachments:
#1 Site Location Map
#2 Site Map
#3 Facilities Questionnaire

B. Geology

2 borings; both 41.5 ft. deep.

Site underlain with interlayered alluvial sand and marine clay deposits. First layer 13-18 ft thick surficial clay; next layer 18-23 ft thick sand and gravel. From 36-41.5 ft in depth (depth of boring) brown to green-brown clay is encountered.

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Logs

Hydrogeology

2 Monitoring Wells (MW); both 41.5 ft. deep.

One aquifer layer defined; aquifer appears to be restricted by clay bed at a depth of 36 ft. (Attachment #5).

Groundwater (GW) encountered 13-15 ft., GW flows North.

Attachments: #5 Hydrogeologic data

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

Soil contamination - no soil tests performed.

GW contamination - 5 chemicals. Major contaminants:

Xylene	5 ppb
Ethylbenzene	4 ppb

Emcon suggests that source for low-level GW contamination from offsite (Attachment #5).

Attachments: #6 Lab Results 6/4/82

D. Case Chronology

Investigation initiated by company to produce baseline data before start of operations onsite.

5/20/82 Facilities Questionnaire completed

6/8/82 Phase I subsurface investigation by Emcon Associates completed. Findings: very low levels of GW contamination (5 ppb or less); no soil testing performed.

E. Current Status (as of 9/19/84)

Designated N/C but no RWQCB confirmation letter in file.

F. References

Emcon Associates Phase I report 6/8/82

FAIRCHILD CAMERA AND INSTRUMENT CORPORATION Site #: OG 23
Optoelectronics Division File Name: B:Fair
Alfred St. site
Santa Clara, CA. 95050

Reviewed 9/19/84; 6/17/85 Reviewer: MCT

A. Description of Site

Fairchild took over lease of buildings in 5/75, occupancy terminated 1983 (4).

Manufacturers of GaAs wafers, use $Ca(OH)_2$ for neutralization.

Previous tenant Exetron. Owner of property Prudential. Hare, Brewer, and Kelly manages property.

Underground tanks include:

1 Waste solvent tank (no longer in use) which contained Acetone, Isopropanol, Xylene, TCA, Freon, and Methanol;
6 Vaulted treatment tanks (3 neutralization tanks and 3 Gallium Arsenide reclaim system tanks);
4 Concrete neutralization sumps.

Waste neutralization system adjacent to Bldg. 95 (see Attachment #2 for location) not used since 1979.

Chemicals stored in tanks:

Acetone
Xylene
Freon
Arsenic
Gallium Arsenide
Silver
Isopropanol
1,1,1-Trichloroethane
Methanol
Gallium
Gold

Attachments: #1 Site Location Map
#2 Site Map
#3 Facilities Questionnaire

B. Geology

7 borings 20-40 ft. in depth (4). Site underlain by surficial clay up to 20 ft. and generally greater than 10 ft. thick, below which lies 7-13 ft. thick sand and gravel deposit which, with the exception of boring 3, lies on an extensive blue-gray clay bed at least 5' thick. Boring 3 has sand and gravel below surficial clay to the total depth of the 40 ft. boring (1).

Soil classification per Risk Assessment Question #11.

NOTE: Engineer's file (TJB) contains copies of boring logs for deep wells in proximity of study area - see Attachment #5 for list.

Attachments: #4 Boring Logs
#5 List of nearby wells

Hydrogeology

7 monitoring wells (MW); deepest 40 ft.

One aquifer layer defined. GW first found in sand and gravel beds, stabilizing in wells 5-10' below ground surface (1).

GW flow N-NE. Tom Iwamura (SCVWD) indicated that shallow GW gradients in the site area are fairly consistent throughout the year but no quantification (Attachment #8). GW gradient 0.67-0.8% (4). No information on GW velocity in file.

GW level at waste neutralization system adjacent to Bldg. 95 is approximately equal to the bottom of the system.

Attachments: #6 PWJ memo 3/30/82

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: TCA, Xylene, Freon detected in both soil and GW; Methanol and Isopropanol detected in soil only (not tested for in GW).

Soil contamination - 9 chemicals. Major contaminants:

Methanol	70 ppm
Isopropanol	40 ppm

GW contamination - 8 chemicals. Major contaminants:

TCE	1,100 ppb
TCA	140 ppb

DG facilities - no nearby facilties
UG facilities - Precision Monolithics, Owens-Corning, Memorex, Container Corp., Technical Coatings, Pacific Nursery Pots, Monsanto.

Spill Incident Report 2/8/84 - holes in walls of concrete vaults. Current tenants (Fairchild) never used the units.

Alhambra bottled water well 1 1/4 miles NE of Fairchild.

Attachments:
#7 Lab Results 2-4/83
#8 List of contaminants common to Fairchild and Precision Monolithics.
#9 RWQCB plume maps

D. Case Chronology

Fairchild initiated investigation after leaks occurred at its facilities (TJB, verbal communicationO.

3/8/82 Emcon Associates Phase I subsurface investigation completed. Findings: GW contamination detected, no soil testing for volatile organics performed.

3/23/82 Emcon Associates Phase II subsurface investigation completed. 3 more MWs installed. Findings: Soil & GW contamination detected.

5/4/82 Emcon report received by RWQCB. Findings: additional well constructed UG from site showed significant GW contamination. Emcon states data points to an offsite source.

5/5/82 PWJ memo states no further chemical sampling required until UG problem evaluated.

5/24/82 Facilities Questionnaire completed

Attachments: #10 PWJ memo 5/5/82

E. Current Status

No further investigation pending results from investigations of possible offsite sources of contamination.

F. References

1. Emcon Associates Phase I report 3/8/82
2. Emcon Associates Phase II report 3/23/82
3. Emcon Associates report 4/28/82
4. 205j case summary comments by Landels, Ripley, and Diamond 3/29/85

HEWLETT PACKARD Site #: OG 24
Stanford Park Division File Name: B:HP-1501
1501 Page Mill Road
Palo Alto, CA.

Date Reviewed: 2/22/85 Reviewer: MCT

A. Description of Site

The Stanford Park facility is located along the top of a NW-SE trending ridge (4). "This site houses the corporate headquarters and R&D labs, Stanford Park Division, and Hewlett-Packard Laboratories R&D labs. R&D operations consist of small laboratories and a model shop for fabricating prototype microcircuit and microelectronic devices. SPD manufactures microwave test equipment and RF generators. Their manufacturing facilities include a small printed circuit and parts plating shop, electronic instrument assembly areas, machine shops for precision parts manufacture, and metal plating, brite dipping and painting operations." (5)

No information on prior occupants or use in file.

For information on underground tanks, see Attachments #2 and #13 (A blueprint with the location of individual tanks is available in the LDP file).

Chemicals handled on site include (4):

- 1,1,1-Trichloroethane
- Trichloroethylene
- Tetrachloroethylene
- Xylene
- Acetone
- Toluene
- Ethyl Benzene
- Phenol
- Benzene
- Methylene Chloride
- Kerosene
- Methyl Cyclo Hexane

See Attachment #3 for General Flow Diagram of Water Use and Deposition.

Attachments: #1 Site Maps
#2 Facilities Questionnaire
#3 Water Use Diagram

B. Geology

Site consists of interlayered sands, gravels, silts, and clays.

21 Borings; deepest 130.5 ft. (6 Cooper & Clark, 4 Dames & Moore, 8 Applied Earth Consultants, 3 Levine*Fricke borings)

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Logs
#5 Geologic Cross-Sections

Hydrogeology

One aquifer layer defined. Shallowest groundwater (GW) at 33 ft (3). Drainage of area NE to Matadero Creek (1) with a GW gradient generally ~5 % (4). GW velocity estimated to be .001 cm/sec in saturated course sand and gravel aquifers (3).

7 Monitoring Wells; deepest 128 ft.

Attachments: #6 Water Level Data

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals handled on site: 1,1,1-TCA, TCE, PCE, Benzene, Methylene Chloride detected in both soil & GW; Xylene, Toluene, Methyl Cyclo Hexane, Ethyl Benzene, and Acetone detected in soil only.

Soil Contamination - 17 chemicals. Major contaminants:

TCE	3,700 ppm
Ethyl Benzene	886.8 ppm

GW Contamination - 10 chemicals. Major contaminants:

1,1,1-TCA	10 ppm
TCE	7.7 ppm

There are three areas of investigation on site (3):
1) Solvent Storage Tanks 4F & 4G (Borings AEC-1,-3,-4,-7). Tank installed 1960 - contained many waste oils and solvents. Tank reported to have overflowed during rainy seasons until rainwater prevented from flooding the tank. "A level test in the fall of 1981 revealed a probable leaky pump-out standpipe" (1).

2) TCA Solvent Storage Tank (Borings AEC-5, -8). Consultants maintain that TCA contamination in GW directly below tank site does not appear to be caused by leakage by tank, based on absence of TCA contamination in AEC-5 between 60 ft. soil sample and GW confined to ~100 ft. deep. They say contaminants may be entering GW at some upgradient location between AEC-8 and AEC-5 (3).

3) Solvent Storage Tank 6A (Borings AEC-2, -6).

For more information on contamination history see Attachment #13.

Attachments: #7 Lab Results
#8 Soil Contamination Graphs
#9 GW Contamination Maps
#10 RWQCB Plume Maps

D. Case Chronology

Leak Detection Program 1982.

7/23/81 HP letter to RJC received with copies of forms to EPA and City of Palo Alto in lieu of UIC program forms.

6/3/82	Facilities Questionnaire received.
6/3/82	Subsurface investigation by Applied Earth Consultants (AEC) received. Investigation limited to chemical storage shed located NE of building 2 & 4 on site. One boring constructed (no GW encountered to 30 ft.). Report cites previous soil sampling by Dames & Moore and Cooper & Clark. Findings: Soil contamination detected.
6/16/82	Final draft of above report received - no significant changes from draft report received 6/3/82.
7/26/82	DOHS letter to HP with notices of violations (Attachment #11)
8/31/82	RJC memo and HP letter reporting discovery of new leak in a TCA tank that was discontinued 10/81 (Attachment #12).
2/3/83	RWQCB letter asking for a firm date for submittal of Phase II report and setting deadline for an interim report.
2/18/83	HP letter received detailing status of tanks and extent of subsurface investigation.
4/10/83	AEC Phase II report completed (Vol. II - Appendices in engineer's file, Vol. I missing). 7 Borings, 4 MWs constructed; deepest 121 ft. Findings: Soil & GW contamination detected.
7/20/83	Phase II Progress report by AEC - summary of previous subsurface investigations.
8/15/83	AEC letter to HP notifying them of additional soil excavation performed onsite (Attachment #14)
12/20/83	AEC letter to HP describing drilling and sampling methods used in area of Solvent Storage Tank 6A.
2/16/84	HP letter to SCH clarifyiing sampling methods used in investigation.
5/15/84	SCH memo of meeting with HP reps 5/10/84.
8/20/84	SCH memo of meeting with HP reps 8/14/84 to discuss analytical techniques and status of site investigations.
10/1/84	Interim Status Report by HP received.
11/29/84	Subsurface investigation report by Levine*Fricke, Inc. received. 3 borings/MWs constructed; deepest 130.5 ft. One well used for extraction (#11). Findings: deepest known GW contamination 128 ft.
12/4/84	Levine*Fricke letter to HP with continuing investigation proposal including offsite monitoring.
12/17/84	SCH memo of meeting with HP reps to discuss offsite MW proposal.

Attachments:	#11	DOHS letter	7/26/82
	#12	HP letter	8/31/82
	#13	HP "	2/15/83
	#14	AEC "	8/15/83

E. Current Status (as of 2/22/85)

Ongoing Phase II

F. References

1. Applied Earth Consultants Phase I report 6/82
2. " " " Phase II report 4/83
3. " " " Phase II Progress report 7/83
4. Levine*Fricke Ongoing Phase II report 11/84
5. EPA Hazardous Waste Disposal form 1981 (for HP)

HEWLETT-PACKARD
Optoelectronics Division
640 Page Mill Road
Palo Alto, CA.

Site #: OG 25
File Name: B:HP-640

Date Reviewed: 2/26/85

Reviewer: MCT

A. Description of Site

No information on operations, length of occupancy, former occupants or use in file.

Site contains:
- 1 - 500 gal vaulted NaOH tank
- 1 - 1000 gal vaulted HF waste tank
- 1 - non-vaulted waste solvent tank (removed 7/81)
- 1 - vaulted NaOH treatment tank
- 1 - 1000 gal neutralization sump

Waste solvent tank historically contained (1):

1,1,1-Trichloroethane	Benzene
Trichloroethylene	Alcohols
Toluene	Other chemicals
Xylene	

Spill report dated 7/17/81 (Attachment #8) describes waste solvents as a mixture of TCE, TCA, Isopropanol, Toluene, Xylene, MeOH, and phenolic compounds.

Attachments: #1 Site Map
#2 Facilities Questionnaire

B. Geology

Stratigraphy under the site is defined by a sequence of alternating layers of thick (10-15 ft.) coarse sand and gravel and thinner (3-5 ft.) sections of sandy clays (1).

15 borings; deepest 71 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs
#4 Geologic Cross Sections

Hydrogeology

1 aquifer defined - range 30-55 ft (2). Shallowest groundwater encountered at 8.45 ft (2).

Site characterized by a "groundwater level surface with arcuate contours concave towards the north that indicate flow towards the north" (2).

GW flow to NE with a gradient of 0.12% (3). "Estimates of transmissivity, storage coefficient and hydraulic conductivity were calculated from the drawdown and recovery data collected during the pumping test for AEC-9,-10, and -11" (3). Average value for transmissitivity 39,887 gpd/ft., average storage coefficient 0.034. Calculated values of hydraulic conductivity ranged from 0.016 cm/sec to 0.13 cm/sec, with an average value of 0.068 cm/sec (3).

13 Monitoring Wells (MW); deepest 71 ft.

Attachments: #5 Water Level Data

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: TCA, TCE, Isopropanol detected in groundwater.

Soil contamination - no chemicals detected but detection limits relatively high (200 ppb and up).

GW contamination - 11 chemicals. Major contaminants:

Isopropanol	11,000 ppm
TCE	186 ppm
TCA	139 ppm

Leak of underground waste solvent tank reported 7/17/81 (Attachment #8) - tank excavated and 100 cubic ft of soil removed the same month (Attachment #9).

Contamination in AEC-1, -2, -3, and -6 appears "to be entering and migrating across the site from upgradient sources to the Northwest and West" (2). Consultants also feel that VOCs in AEC-4, -5, -8, -10, and -11 may be coming from offsite (2). They also state "it is not clear whether the volatile organic compounds detected in the groundwater sample from AEC-13 are from off-site or from the leak in the former solvent storage tank" (2).

Consultants feel that contamination front appears to be located in the area between MON-1 and AEC-7, flowing towards AEC-7 but SCH skeptical of contamination front conclusions drawn by consultants (SCH memo 9/26/84, RWQCB letter 11/1/84 - see Attachment #10).

DHE has acknowledged that the extent of contamination for Isopropanol has been defined (Attachment #12). Unable to define plumes for TCE, TCA (Attachment #7).

For a list of upgradient sites with underground tanks, see Attachment #13.

Attachments: #6 Lab Results
#7 RWQCB Plume Maps

D. Case Chronology

7/17/81	Spill Report of waste solvent tank leak (Attahcment #8).
3/25/82	RWQCB letter comments on Phase I study by William Cotton & Associates (not in file) (Attachment #9).
5/24/82	Facilities Questionnaire received.
2/11/83	Subsurface investigation by Applied Earth Consultants (AEC) completed. 8 borings/MWs contructed; deepest 71 ft. Findings: GW contamination detected, no soil analysis performed (only TCA, TCE, Isopropanol tested for in GW).
1/9/84	Pumping Test Results by AEC completed. 4 borings/MWs constructed; deepest 59 ft. Hydrogeologic investigation only - no GW analysis performed.
1/9/84	Proposal by AEC to perform Line-of-gradient subsurface investigation completed.
2/15/84	SCH memo comments on AEC reports dated 1/9/84.
8/6/84	HP letter to Palo Alto Wastewater Treatment Plant discussing discharge of TCA and TCE into sewer from pumping wells.
8/14/84	Line-of-gradient Subsurface Investigation and Sampling Report by AEC received. 1 boring/MW constructed (59 ft.) - located ~100 downgradient from former solvent tank. Findings: GW but no soil contamination detected (detection limits for soil tests relatively high).
9/5/84	RWQCB letter summarizes status of investigations of HP sites in Palo Alto and Cupertino.
9/26/84	SCH memo comments on AEC report received 8/14/84 contains skepticism of contamination front conclusions drawn by report.
11/1/84	RWQCB letter to HP with comments on site investigation reiterates comments from SCH memo (Attachment #10).
11/15/84	SCH memo summarizes 11/13/84 meeting with HP (Attachment #11).
11/29/84	HP letter summarizes 11/13/84 meeting with RWQCB. HP states DME acknowledges extent of contamination definition for Isopropanol (Attachment #12).
12/3/84	HP requests a delay in date of variance to discharge water from pump test.
12/13/84	SCH memo with information on tanks in area of 640 Page Mill Road site. Most sites not under investigation by RWQCB (Attachment #13).
12/17/84	SCH memo with comments from 12/17/84 meeting with HP. (Attachment #14).
12/20/84	SCH memo OK's "B" aquifer well proposal received at meeting with HP 12/17/84.
1/14/85	RWQCB received HP letter (dated 12/27/84) with summary of 12/17/84 meeting between HP, consultants, RWQCB, and SCVWD. Main priorities in continuing investigation were: (1) NW plume definition offsite, (2) deeper aquifer investigation, and (3) pumping to remove contaminants (Attachment #15). Included in letter were

latest lab results from sampling performed 11/16/84 (see Attachment #6).

1/23/85 SCH receives HP letter (dated 1/21/85) submitting proposal for offsite well construction.

1/24/85 SCH memo documents verbal OK of construction of 3 shallow MWs to clarify shallow gradient offsite and whether upgradient contamination exists.

Attachments:
- #8 Spill Report 7/17/81
- #9 RWQCB letter 3/25/82
- #10 RWQCB letter 11/1/84
- #11 SCH memo 11/15/84
- #12 HP letter 11/29/84
- #13 SCH memo 12/13/84
- #14 SCH memo 12/17/84
- #15 HP letter 12/27/84

E. Current Status (as of 2/26/85)

Ongoing Phase II

F. References

1. RWQCB letter 3/25/82 (W. Cotton & Associates Phase I Report Summary)
2. Subsurface Investigation by Applied Earth Consultants 2/11/83
3. Pumping Test Results by Applied Earth Consultants 1/9/84
4. Line-of-Gradient Subsurface Investigation by Applied Earth Consultants 6/15/84

HEWLETT-PACKARD LABORATORIES
3500 Deer Creek Road, Bldg. 25
Palo Alto, CA. 94306

Site #: OG 26
File Name: B:HP-Deer

Reviewed 3/37/85

Reviewer: MCT

A. Description of Site

Building 25 and surrounding parking lot constructed in 1970. No information on operations, former occupants or use in file. An additional building (Bldg. 26) was constructed during the subsurface investigation but no details in file - it just shows up on site map in 2/85 hydrogeologic report in the parking lot.

A 2,000 gal. polyester resin tank was put into service in 1975 to store spent organic solvents generated by facility processes. Chemicals stored in the tank included Trichloroethylene, Xylene, Isopropanol, Methanol, and Acetone. Suspected fluid loss was confirmed 10/80 and the damaged tank removed 4/81 (1). Estimated leakage occurred over a period of about two years (2).

No facility questionnaire in file.

Attachments: #1 Site Maps

B. Geology

Developed portions of the site are underlain by 5-10 ft. of fill (1). Soils below the water table consist of variable silty sands, clays, and gravels of the Santa Clara formation (2).

14 Borings; deepest 52.5 ft. Additional borings noted from earlier studies by Engineering Sciences, Inc. but no logs in file (1).

Soil classification per Risk Assessment Question #11.

Attachments: #2 Boring Logs
#3 Geologic Profiles

Hydrogeology

One aquifer layer defined. Shallowest groundwater (GW) ~25 ft.(2). Although regional GW flow is eastward, a localized westerly hydraulic gradient exists across the site towards Deer Creek (2). No information on GW gradient or velocity in file.

~5 ft. below water table 3-6 ft. clay layer acts as an aquiclude. Laboratory permeability tests show vertical permeabilities ranging from 8.4 x e-9 to 4.7 x e-8 cm/sec (1). In-situ rising head permeability tests indicated low horizontal permeabilities ranging from 2.7 x e-5 to 1.4 x e-3 cm/sec in the vicinity of the former tank (1).

Deer Creek, a small year-round stream, flows north and east along the western and northern edges of the site (2). GW from site vicinity discharges into Deer Creek (Dames & Moore Proposal 7/84).

11 Monitoring Well (MW); deepest 52.5 ft.
1 Extraction Well (W-1) installed.

Attachments: #4 Hydrogeologic Data

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: TCE, Xylene, Isopropanol, and Acetone detected in both soil and GW.

Soil contamination - 4 chemicals. Major contaminants:

Isopropanol	160 ppm
Acetone	19 ppm

GW contamination - 9 chemicals. Major contaminants:

Trichloroethylene	6000 ppm
Xylene	2600 ppm

Leak confirmed from solvent waste tank 10/80 by filling tank with water and recording a "drawdown" of 3.5 inches over a 24 hour period (1). Solvent concentrations in the contaminated area increase with depth through the unsaturated soil zone above the water table, reach maximum levels within the GW zone above the clay layer, and decrease to trace levels below the clay (1). A 3-6 ft. thick clay layer which occurs about 5 to 10 ft. below the water table in the vicinity of the solvent tank leak appears to substantially retard downward migration of contaminants present in the GW (2).

TCE, TCA detected in Deer Creek water (see Attachment #9).

Pumping from well W-1 from 1/25/82 to 2/19/82. From 2/19/82 well B-4 used for extraction. Treatment of well discharge water through aeration began 9/8/82. Prior to start of treatment well discharge water stored in 55 gal. drums at the site (2).

Pumping well B-4 has a maximum pumping rate of 0.4 gpm. The drawdown cone created by pumping was calculated by the consultants to be sufficiently wide to contain the solvent plume (4).

Attachments: #5 Lab Results
#6 Contamination Maps

D. Case Chronology

10/80	Solvent tank leak confirmed.
2/81	Initial investigation by Engineering Sciences, Inc. (ESI). 4 borings within 20 ft. radius of tank. Soil

	contamination detected (1).
4/81	Additional investigatin by ESI. 8 borings; deepest 40 ft. Soil, 1 GW sample, 2 Deer Creek samples analyzed (1).
11/81	Geotechnical Investigation by Dames & Moore. 9 borings (deepest 78 ft.)/7 MWs (deepest 52.5 ft.). Findings: soil, GW contamination.
11/16/81	DOHS letter to HP with notice of violations (Attachment #7).
2/17/82	HP letter received with information on status of clean-up of leak confirmed 10/80 (Attachment #8).
5/4/83	Groundwater Cleanup Consultation by Dames & Moore received. Progress report of remedial activities.
1/25/84	HP asks for delay in submitting proposal for further investigation.
2/15/84	HP letter received with sampling results of Deer Creek monitoring (Attachment #9). TCE, TCA detected.
7/24/84	Dames & Moore proposal for additional study received.
8/14/84	GW Sampling and Analysis Report by Dames & Moore received. Findings: GW contamination (resampling of existing wells only).
9/5/84	RWQCB letter summarizes 8/14/84 meeting with HP on status of investigation of HP sites in Palo Alto and Cupertino. Analytic method used for Deer Creek samples and potential requirements for further plume definition discussed.
10/29/84	HP letter with results of Deer Creek monitoring. TCE detected in two samples (Attachment #10)
11/6/84	SCH memo with comments on 7/84 and 8/84 reports (Attachment #11).
1/2/85	RWQCB letter with comments on proposal for further investigation and data report. Letter requires installation of a well to the next aquifer (Attachment #12).
2/25/85	Preliminary Report - Hydrogeologic Investigation by Dames & Moore. Report on effectiveness of remedial actions.

Attachments:	#7	DOHS letter	11/16/81
	#8	HP "	2/16/82
	#9	HP "	2/14/84
	#10	HP "	10/29/84
	#11	SCH memo	11/6/84
	#12	RWQCB letter	1/2/85

E. Current Status (as of 3/27/85)

Ongoin Phase II.

F. References

1. Geotechnical Investigation - HP Labs Bldg 25. Dames & Moore 11/81
2. Groundwater Cleanup Consultation. Dames & Moore 4/83
3. GW Sampling and Analysis Report. Dames & Moore 8/84
4. Preliminary Report - Hydrogeologic Investigation. Dames & Moore 2/85

WESTINGHOUSE ELECTRIC CORPORATION
Marine Division Plant
Sunnyvale, CA

Site #: OG 27
File Name: B:Westing

Date Reviewed: 8/29/84

Reviewer: MCT

A. Description of Site

Plant's current uses designing, manufacturing, testing, and servicing marine products. Westinghouse formerly manufactured electrical transformers filled with PCB liquid at this plant.

Site acquired in 1947, formerly Joshua Hendy Iron Works. Former occupants had biult ship propulsion steam turbines and gears under license from Westinghouse. In 1964 Marine Division established, production of electrical apparatus ceased. All PCB contamination due to dumping of waste oils prior to 1964.

Most of the site is paved except for the area in the northeast corner of the site and the area north of Building 61 (see map, Attachment #2). The unpaved areas are used as equipment and materials storage yards and contain patches of oil-stained soils. Former PCB storage area located in southeast corner of site.

Attachments: #1 Site Location Map
#2 Site Maps with Soil Boring Locations
#3 North Parking Lot Site Map with Surface Soil Sample Locations

Geology

Surficial geologic materials Quaternary alluvium. Predominantly fine textured fill, clay and silt with lenses and layers of coarse-grained sand and sand-gravel mixtures. Sand lenses 2-7 ft thick between 30-44 ft. below grounds surface and 3 ft thick at a depth of 60 ft. at Monitoring Well (MW) #16.

284 Surface soil samples analyzed during Phase I study.
47 Subsurface soil locations sampled during Phase I study.
18 Deep Borings (range 16-63.5 ft deep except for one boring 3 ft in depth)
10 Additional subsurface soil borings collected during Phase II study.
Deepest boring 80 ft.

See Attachment #2 for soil boring locations. Soil Classification per Risk Assessment Question #11.

Attachments: #4 Geologic cross-section of PCB Storage Area (2 pages)
#5 Boring Log data (39 pages)

Hydrogeology (data from Phase II study except where noted)

Two water-bearing zones identified. Upper water bearing zone in vicinity at a depth range of about 30-50 ft.; Lower zone approximately 56-71 ft. in depth.

The uppermost water-bearing zone consists of sand and gravel deposits that vary in thickness from a minimum of 4 ft. to over 10 ft. The lower zone varies considerably from 4-16 ft. in thickness. There is a significant difference in water level elevations between the monitoring wells in the upper and lower zones. The difference measured between the pairs of monitoring wells is generally 5 ft. This difference indicates that the formations are not directly connected hydraulically. Hydraulic continuity appears to extend horizontally within each zone but not vertically between zones.

In the upper water-bearing zone groundwater (GW) flow east, west and south from the former PCB storage area with a maximum velocity of 24 ft/yr. The steepest GW gradient in this zone is 0.0166 ft/ft.

In the lower water-bearing zone GW flows northeast, reaching a maximum velocity of 3 ft/yr. The average gradient in this zone is calculated to be 0.002 ft/ft.

Site in drainage basin of Calabazas Creek (Guadalupe Slough), west of the Guadalupe River. (Phase I study)

7 Monitoring Wells (MW) constructed during Phase I study.
8 MWs constructed during Phase II study. Deepest Well 80 ft.
MWs only in vicinity of former PCB storage area (no MWs in other areas of contamination). See Attachment #4 for locations.

Attachments: #6 Hydrogeologic data (3 pages)

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

Specific areas having PCB concentrations above levels acceptable to DOHS:

- Along the east and west fence lines and the former west property line adjacent to Building 164.
- Yard areas in the NE corner and N of Building 161.
- The former PCB storage area, including subsurface soils to a depth of about 45 ft. below the land surface.
- Shallow GW beneath the former PCB storage area that is directly associated with the subsurface contaminated soils.
- The former PCB storage tank and pipeline containing PCB fluids. (1)

All MWs sampled for PCBs and mono-, di-, tri-, and tetrachlorobenzene during Phase II study. Wells 16, 20, 21, and 24 were sampled and analyzed for all 31 EPA volatile organic priority pollutants - no purgable organics detected (2). MWs only in vacinity of former PCB storage area (no MWs in other areas of soil contamination).

Soil Contamination - soils tested for PCBs, and di-, tri-, and tetrachlorobenzene; only Aroclor 1260 and trichlorobenzene detected. Highest PCB concentration found 270,000 ppm in surface soil around former PCB storage area (1); highest trichlorobenzene contamination 170 ppb (Boring #28 70.0-70.5 ft. below grade). Deepest contamination >50 ppm 43.0-43.5 ft. (Boring #17 - 160 ppm) within the former PCB storage area. Outside the former PCB storage area soil contamination is generally not greater than 50 ppm at a depth of 1 ft. with 2 exceptions (North of bldg. 61 where contamination did not fall below 50 ppm until a sampling depth of 18 to 24 inches was reached and at pothole 12 near bldg. 12 where PCB contamination is above 50 ppm down to the 5-foot depth). (2)

GW Contamination - 5 chemicals. Major contaminants:

Upper Water-Bearing Zone:	
Trichlorobenzene	12,507 ppb
Aroclor 1260	9,200 ppb
Dichlorobenzene	1,490 ppb
Lower Water-Bearing Zone:	
Trichlorobenzene	981 ppb
Aroclor 1260	260 ppb
Dichlorobenzene	147 ppb

Brown & Caldwell in their Phase II report attribute the high PCB concentration found (9,200 ppb) in MW #15 to an oil fraction in the sample since a later analysis from the same sample showed only 130 ppb PCB. Other samples ranged from 2 to 260 ppb PCB.

Of PCBs, only Aroclor 1260 reported. Notation on bottom of lab results states Aroclors 1016 to 1262 would have been reported had they appeared at or above detection limits of 0.3 ug/l for GW and 0.05 ppm for soil.

80 wells within one mile radius of the former PCB storage area. Of these wells, 19 are reported destroyed, 13 are reported presently producing, and 48 have unknown status. No information on type of ownership (public or private). (1)

8 wells are within 1/4 mile of former storage area including two wells owned by Westinghouse. One Westinghouse well is presently inactive. The other, well 6S2W25J01, is located on site south of Building 61 and produced 171 acre ft. of drinking water in water year 1980. Production is from below a depth of 200 ft. (1) 3 of the remaining wells are on sites leased by National Semiconductor. None of the above 4 wells mentioned showed any PCBs although one Nat. Semi. well showed 350 ppb TCE and 10 ppb PCE. (3)

Some subsurface lateral movement of PCBs has been indicated in the former PCB storage area. In addition, PCBs appear to have moved below the water table. (see Attachment #10) (2)

Samples of onsite industrial and drinking water supplies were also analyzed for the prescence of PCBs as well as tanks which might have at any time contained oils or solvents - water supplies were found to be uncontaminated but contamination was found in most tanks. (see Attachment #12)

Attachments:	#7	Groundwater Analysis
	#8	Soil Analysis
	#9	Map of Soil Contamination
	#10	Contamination Information
	#11	National Semiconductor Data
	#12	PCB Concentrations in Other Fluids
	#13	RWQCB Plume Maps

D. Case Chronology

Investigation initiated by Westinghouse in 1981 - prompted by recent attention on dangers of PCBs

Phase I report (to define extent of PCB contamination onsite) by Brown & Caldwell completed 12/81. Findings: extensive soil contamination throughout site with GW contamination where tested (in former PCB storage area). The former PCB storage tank and pipelines have been identified as a potential source of PCBs.

Phase II report (Site Investigation Final Report with corrective measure alternatives) by Brown & Caldwell received 6/23/83. Findings: Hydrogeologic data defined for site. MWs and borings resampled and new MWs and borings constructed. Plume maps were not drawn for site. Recommended Actions:

1. Excavation of shallow soils to depth of contamination.
2. Removal of PCB storage tank and pipelines.
3. Containment/extraction in old storage area for dealing with deep soil contamination.

April 16, 1984 - RWQCB letter asked for delay in fence line cleanup due to potential of rain-induced erosion of contaminated soils into surface waters until further studies could be done.

June 26, 1984 - DOHS letter directed Westinghouse to remove selected soils along fence line which bordered residential or other areas of potential public contact in order to limit concentrations in soils to 2 ppm at a depth of 2 ft. and 50 ppm at greater depths.

July 16, 1984 - Westinghouse letter to RWQCB expressed desire to proceed with DOHS directive and forego RWQCB request for additional study.

July 19, 1984 - RWQCB letter to Westinghouse set 8/16/84 as deadline for report on extent of offsite residential contamination and feasibility of removal of all soils contaminated that are above background levels.

July 26, 1984 - Westinghouse letter to RWQCB stating deadline of 8/16/84 unfeasible.

Attachments:	#14	RWQCB letter dated 4/16/84
	#15	DOHS letter dated 6/26/84
	#16	Westinghouse letter dated 7/16/84
	#17	RWQCB letter dated 7/19/84
	#18	Westinghouse letter dated 7/26/84

E. Current Status (as of 8/29/84)

Waiting for additional studies from Westinghouse.

F. References

1. Brown & Caldwell 12/81
2. Brown & Caldwell 6/83
3. Emcon Associates 1/83 (for National Semiconductor)

TELEDYNE SEMICONDUCTOR
1300 Terra Bella Avenue
Mountain View, CA

Site #: OG 28
File Name: B:Teledyne

Reviewed 8/84;4/10/85, 5/15/85

Reviewer:LAP/ MCT

A. Description of Site

The plant and adjoining parking facilities total approximately 8 acres of land, bordered on the Northeast and South by light industrial development and to the West by residential development (2).

South half of facility built in 1962, the land previously being used for agriculture. Tank "D" was installed at this time. In 1966 the northern half of the facility was built and tanks "B" and "C" were installed. Tank "A" was later installed in 1975. In 1979 the usage of drainage lines from the workplace to the tanks was discontinued and replaced with 5 gal. waste drums. This then eliminated the prescence of TCE, Xylene, Acetone, and Isopropanol from the underground system. The usage of TCE was replaced with TCA in 1980. In December 1979 tank "D" was repaired when Hydrofluoric Acid had corroded the concrete at a metal drain connection (2). The current use of this site is semiconductor manufacturing.

All drain lines utilized for solvent transport to the underground tanks were plugged in 1980. Drain lines for wastewater from work areas remained in operations and are still in use (6).

4 Underground tanks on site:
- 1 - 2000 gal. steel nonvaulted waste storage tank (removed 8/82 and replaced with clean fill (6)).
- 3 - concrete sumps (one no longer in use (6)).

See Attachment #3 for descriptions of sites in vicinity.

Attachments: #1 Site Maps
#2 Facilities Questionnaire
#3 Facilities Questionnaire information from sites in vicinity.

B. Geology

Site underlain by interlayered silty clays, clays, sands, and gravels.

18 Borings; deepest 130 ft.

Soil classification per Risk Assessment question #11.

Attachments: #4 Boring Logs
#5 Geologic Profiles

Hydrogeology

Three Aquifers defined:
"A" 10-35 ft.
"B" 45-65 ft.
Deep Aquifer >150 ft. (SCVWD)

Shallowest groundwater (GW) encountered ~8 ft. (2). Average GW gradient 0.6%. Flow direction in North for both shallow and intermediate water bearing zones (3). Flow velocities between 0.48 and 1.81 ft/day in uppermost water bearing zones beneath Teledyne plant; average velocities below Drive-In Theater north of plant 0.60 - 2.26 ft/day (3).

18 Monitoring Wells (MW); deepest 80 ft. Five MWs (#14-18) located offsite.

Buried stream channel suggested running north-to-south under the property (3). The much poorer east-to-west continuity of waterbearing units compared to that in the south-to-north direction implies that the potential for contaminant migration perpendicular to the general direction of flow in the immediate vicinity of the Teledyne plant is likely to be much lower than in the norht-south direction (3).

Horizontal hydraulic gradient steepens to the north of the Teledyne property as a result of the large number of pumping wells located north of MW #18 (3).

Upper aquifer generally confined to 30-40 ft. depth by a bluish-gray clay layer. Preliminary indications (by consultant) are that perforations in intermediate depth wells #5,7, & 9 are below this layer while perforations in well #11 are above it. If this is true, waters entering well #11 are of a different origin than are waters entering wells #5,7, & 9 (3).

Attachments: #6 GW contour map

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemical stored on site: TCE detected in soil and GW, TCA detected in GW only, Xylene detected in soil only.

Soil contamination - 5 chemicals. Major contaminants:

Xylene	663 ppb
TCE	258 ppb

GW contamination - 9 chemicals. Major contaminants:

TCE	9,800 ppb
1,2-DCE	4,200 ppb

Multiple sources of contamination are suggested due to varying

TCE/DCE ratios and sporadic findings of Freon, Tetrachloroethene, TCA, and Methylene Chloride (4). Possible contamination sources are identified in Attachment #11 and include nearby facilities, septic tanks, and the Mountain View landfill. High coliform counts in GW in addition to VOCs - due to septic tanks and leach fields in area (4).

120 wells within 1 mile radius of Teledyne site (2). Santa Clara County Health Department has warned residents of the area bounded by Charleston Road, Highway 101, Stierlin Road and Permanente Creek not to drink well water due to contamination. Teledyne advanced the costs for connecting residents there to the City of Mountain View water system in 1984. The 47 wells in that area are no longer used for domestic purposes (6).

Slight contamination found in City of Mountain View survey (3/28/85). Analysis for well G6A showed:

1,1,1-TCA	8 ppb
TCE	9 ppb

Map with location of well 6A in relation to Teledyne shown on Attachment #11.

Attachments: #7 Lab Results
#8 Private Well Data
#9 Shallow Zone contamination maps
#10 Intermediate Zone contamination maps
#11 Possible contamination sources

D. Case Chronology

Leak Detection Program 1982.

5/23/82 Facilites Questionnaire completed.

11/18/82 Draft Phase I report by J.H. Kleinfelder & Associates (JHK) received.

12/9/82 Phase I report by JHK completed. 3 borings/MWs installed; deepest 36.5 ft. Contamination found.

12/30/82 RWQCB letter with comments on Phase II proposal.

8/26/83 Geotechnical Investigation (Phase II) report by JHK completed. 5 borings/MWs; deepest 71.5 ft. Aquifers identified, more extensive contamination detected.

12/5/83 Phase IIB proposal by JHK received.

5/29/84 Phase IIB preliminary results received.

6/15/84 Landels, Ripley, and Diamond (attorneys) letter requests facilities questionnaires for facilities in area of Teledyne.

6/20/84 Teledyne letter to City of Mountain View volunteering funds for private hookups to residents in study area. (Attachment #12)

7/20/84 Landels, Ripley, and Diamond letter received summarizing 7/11 meeting with RWQCB & Teledyne.

7/23/84 RWQCB letter summarizes 7/11 meeting with Teledyne.

7/31/84 Phase IIB report by JHK received. 10 MWs installed; deepest 80 ft. (includes offsite wells). GW contamination detected offsite.

7/31/84 Private Well Sampling Report by JHK received. Findings: VOC, coliform contamination detected in private wells.

8/1/84 Teledyne letter received with summary of solvent storage and waste disposal practices (Attachment #13).

8/31/84 Phase IIIA proposal by JHK received.

10/4/84 RWQCB letter with comments on Phase III proposal (Attachment #14).

10/18/84 DOHS letter with comments on Phase IIIA proposal (Attachment #15).

10/23/84 Teledyne letter received responds to RWQCB comments on Phase III proposal (Attachment #16).

11/13/84 RWQCB letter with comments on Phase III proposal amendments.

11/19/84 SCH memo concerning Crittendon School well issue (Attachment #17).

11/29/84 DOHS letter discusses private well sampling results (Attachment #18).

12/3/84 Whisman School District letter to Teledyne with plans to abandon Crittendon School well (Attachment #19).

12/6/84 RWQCB memo to DOHS discusses lack of coordination between agencies in investigation requirements of Teledyne (Attachment #20).

12/10/84 SCH memo concerning use of Crittendon School well as deep aquifer well.

12/17/84 JHK letter received with logs from Crittendon School and Huff Ave (Diessner) wells.

12/19/84 Teledyne letter to Whisman School District informing them of planned modifications of Crittendon School well (Attachment #21).

1/10/85 SCH memo. Tom Iwamura (SCVWD) doesn't think well proposed for deep aquifer monitoring is perforated in the same aquifer being used by the City of Mountain View for drinking water.

1/14/85 SWRCB memo with comments on Teledyne's 12/7/84 letter.

2/14/85 RWQCB letter responds to time schedule proposed by Teledyne 12/7/84. CAO considered for Teledyne and Spectra Physics. Meeting suggested with both. (Attachment #22)

2/15/85 SCH memo discusses validity of landfill sampling methods.

3/28/85 City of Mountain View GW results - slight contamination in wells.

4/3/85 RWQCB letter with requirements for further investigation based on 3/18 meeting (Attachment #24).

4/5/85 Teledyne letter received re: confirmation of 3/18/85 discussions between Teledyne, Spectra-Physic, and RWQCB (Attachment #23).

Attachments:
#12 Teledyne letter 6/20/84
#13 " " 7/25/84
#14 RWQCB " 10/4/84
#15 DOHS " 10/18/84
#16 Teledyne " 10/18/84
#17 SCH memo 11/19/84
#18 DOHS letter 11/29/84
#19 Whisman School District letter 12/3/84

#20 RWQCB memo 12/6/84
#21 Teledyne letter 12/19/84
#22 RWQCB " 2/14/85
#23 Teledyne " 3/25/85
#24 RWQCB " 4/3/85

E. Current Status (as of 4/10/85)

Ongoing Phase II.

F. References

1. Phase I report by JHK 12/82
2. Geotechnical Investigation (Phase II) report by JHK 8/83
3. Phase IIB report by JHK 7/84
4. Private Well Sampling report by JHK 7/84
5. Preliminary Sampling Results by JHK 3/85
6. Teledyne comments dated 5/10/85.

NEC Electronic Arrays   Site #: OG 29
501 Ellis St., Mt View 94043   File Name: NEC

Facility: 1 Bldg
Date Reviewed: 9/84;3/85;5/85   Reviewer:LAP/LK

A. Description of Site

No info re: previous use of site.
Bldg constructed 1968, leased by Electronics Arrays from 1968 to 1977; Electronics Arrays purchased by NEC Electronics 1977 and merged into NEC Electronics 1981.
Operations on site conducted from 1968 to 4/84; manufacturing semiconductor and related electronic equipment.

1 2000 gal underground non-vaulted waste solvent storage tank; installed 1974; tank bottom 8 ft below grade; gravity fed; out of service 5/84
2 2000 gal underground acid neutralization sumps; installed 1972; 112,000-120,000 gpd; out of service 5/84
1 above ground Burmar waste storage tank; 175 ft E of bldg, connected to bldg by shallow plastic line; out of service 5/84

Chemicals stored/used on site:
Acetone, Xylene, Freon TF, Methyl alcohol, 10% HMDS (Hexamethyldisidazane), HR-200, Burmar 712D, 50% HMDS.
Acids = Ammonium fluoride, Hydrogen peroxide, Hydrofluoric acid, Sulfuric acid, Nitric acid, Ammonium hydroxide, Phosphoric acid, Acetic acid, Hydrazine, Ethylene diamine, Tetramethyl ammoniumhydroxide, ammonium phosphate.

Solvent tank chemicals = Xylene, n-Butyl acetate, Toluene, Isopropyl alcohol (IPA), Acetone, Methanol, TCA.

Kleinfelder 11/82 report notes Electronic Arrays "historical records indicate very little TCE at this location."

Burmar unit = Chlorobenzenes, including Trichlorobenzene, Phenol, Napthalene, aromatic solvents (Benzene - 3, 4, and 5 Carbons)

Major facilities in area: Fairchild Camera and Instrument, Siltec, Raytheon, and Intel.

Attachments:		
	#1 - Site Location Map	2 pgs
	#2 - Facility Map	2 pgs
	#3 - Facility Questionnaire	8 pgs
	#4 - Chemicals OnSite	9 pgs

B. Geology

Soils in vicinity consist of irregular and interbedded layers of sands, silts, gravels, and clays.
Deepest boring on site = 58 ft, B-8B.

Missing Boring Logs 3,4,5 (early investigations); and 18 through 36 for 8/84 investigations.

Soil Classification per Risk Assessment Question # 11.

Attachments: #5 - Geologic Cross Section
#6 - Boring Logs 18 pgs

Hydrogeology

8 groundwater monitoring wells (MW).
- 1 well (MW-10) off-site
- 1 well (MW-8B) in deep aquifer, to 58 ft
- MW-2 destroyed 10/84

2 Aquifers sampled:
- A aquifer = 15-30 ft depth; MW-8B to 58 ft depth.
- Shallowest GW = 6 ft, MW-9, 11/83
- Velocity reported as = 0.3-3.0 ft/day measured in MW 1 and 2

GW flow direction complex:
- regional flow assumed N
- S flow direction noted around MW 1 and 2 (11/82, 3/83 Reports) suggesting perched water table there or other external influence.
- NW flow direction noted for MWs 7,8,9 (3/84 Report).

GW gradient not defined.

Hetch-Hetchy Aqueduct south of facility.

Attachments: #7 - Hydrogeologic Information 8 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected in GW = >10 soil = >10

Major GW contamination from chemicals used onsite detected in A aquifer (ppb):

Phenolics	50,000	MW-1
Freon-113	6,300	MW-2
TCE	2,700	MW-1
TCB	2,480	MW-8

B aquifer contamination (ppb):

TCE	2,100	MW-8B
Freon-113	40	"

Off-site contamination (ppb):

TCE	890	MW-10
Freon-113	150	"

Major soil contamination around boring 4, SE corner of bldg near Burmar line connection; for specified chemicals on-site(ppb):

TCB	30,000,000	3 ft
Phenolics	1,500,000	"
Freon-113	310,000	"
Napthalene	47,000	2.5 ft
IPA	7,500	3 ft

Burmar line, solvent tank, and acid neutralization sump removed by 10/84.
Soil excavation = 86 cu yds from beneath Burmar line and around solvent tank.

MW-2 destroyed during tank excavation.

Plume maps not provided in Reports; RWQCB Plume map attached for early investigation results.

Leaks:

1. Leak from Burmar line suspected 5/83; confirmed during 10/84 soil excavation; removed 10/84.
2. Solvent tank intact but large leak through valve on bldg drain line outside bldg noted by Smith/Denison 7/84 report.
3. Crack in first section of acid neutralization unit detected during 10/84 exvacation.

Burmar line, solvent tank, and acid neutralization sump removed by 1/85.
MW-2 destroyed during tank excavation.

Soil excavation = 86 cu yds from beneath Buramr line and around solvent tank.

Attachments:		
	#8 - GW Data	11 pgs
	#9 - Soil Data	16 pgs
	#10 - RWQCB Plume Map	
	#11 - Leaks Information	10 pgs

D. Case Chronology

6/82 Facility Questionnaire completed for RWQCB Leak Detection Program

11/82 Phase I subsurface investigation by JH Kleinfelder & Asso
Findings - only GW analyzed = contamination

3/83 Phase II Report by Kleinfelder
Findings - 1 soil boring done = contamination

3/84 Phase III Report by Kleinfelder
3 additional wells installed (#7,8,9)
3 additional soil samples (#4,5,6)

5/84 Installed wells #10,11, and 8B
Soil sampled #12-17

8/84 Soil sampled #18-36

10/84 Remedial Work Report by Kleinfelder
Burmar line, solvent tank, acid neutralization sump removed; soil excavated.

1/885 Remedial action report issued.

E. Current Status

3/85 NEC one of 5 facilities in area being monitored by RWQCB
Status = OnGoing; plume definition and containment.

Attachment: #12 - RWQCB Status 3 pgs

F. References

J.H.Kleinfelder Reports 11/82, 3/83, 3/84, 5/84, 1/85.
Correspondences (as above).

CIRCO, INC.
940 Hamlin Court
Sunnyvale, CA 94088

Site #: OG 30
File Name: CIRCO

Date Reviewed: 9/10/84

Reviewer: MCT

Facility: 1 building

A. Description of Site

Circo manufactures printed circuit boards - no info on length of occupancy or prior use of site in file.

Organic solvents, cleaners, strippers, acids, catalysts, and metals used - see Attachment #4 for more detailed description.

No underground tanks onsite; one-6 cell underground concrete sump onsite:

- Cell 1 - Wastewater containing metallic compounds
- Cell 2 - Plant floor drainage
- Cell 3 - Oils and photochemicals
- Cell 4 - Rinse Water
- Cell 5 - Concentrated acids and bases
- Cell 6 - Chromium and sulfuric acid from 1974-76, alkaline etches after 1976

Bottom of sump 13 ft. below grade.

Attachments:
- #1 Site Location Map
- #2 Site Map
- #3 Facilities Questionnaire
- #4 Chemical Inventory
- #5 Weiss Assoc. data on sump contents

B. Geology

Subsurface materials consist of ~2.5 ft. of fill underlain by mostly silty clays.

1 Boring - depth 33 ft.

Soil Classification per Risk Assessment Question #11.

Attachments: #6 Boring Log

Hydrogeology

One aquifer layer defined, no info on depth range

Groundwater (GW) flow N, gradient low (Weiss assumption based on SCVWD data). Shallowest GW ~10.5 ft. No info on velocity.

Only 1 monitoring well (MW) - located 8 ft. north of underground concrete sump (Attachment #6).

C. Contamination

See Risk Assessment - Chemical Properties: Question 1,2,3,4.

For chemicals used on site: Methylene Chloride (60 ppb) and TCE (9 ppb) detected in GW.

Soil contamination - No detection of chemicals in soil but detection limits moderately high (20-70 ppb). Soil sample for chemical analysis collected in saturated zone between 12.5-13.5 ft.

GW contamination - 6 chemicals. Major contaminants:

Di-n-Butyl Pthalate	90 ppb
Methylene Chloride	60 ppb
trans-1,2-DCE	47 ppb

Weiss Associates considers Di-n-butyl Pthalate contamination from tubing used to collect samples (Attachment #9).

Weiss Associates indicates that some leakage from the sump has occured (Attachment #9).

More recent chemical analysis (Attachment #8) shows lower levels of contamination than earlier samples.

Attachments: #7 Lab Results 12/83-1/84
#8 " " 6/84
#9 Weiss Associates findings

Facilities UG: Applied Technology, Ampex, Exar-Integrated, Advanced LSI, Zymos, Data General, Verbatim, Zymos. Closest facility UG Applied Technology - common contaminants TCE, trans-1,2-DCE, Chloroform, Freon. Applied has higher levels except for trans-1,2-DCE.

Only 1 MW so no plume maps drawn by RWQCB

D. Case Chronology

Leak Detection Program 1982

6/12/82	Facilities Questionnaire received by RWQCB
3/7/84	Phase I subsurface investigation by Weiss Associates received by RWQCB. Findings: low levels of GW contamination.
5/21/84	Circo directed by RWQCB to conduct additional studies to determine extent and source of contamination.
6/29/84	New lab results received from Weiss Assoc. showing lower levels of volatile organic contamination than in earlier report (Attachment #8).

Attachment: #10 RWQCB letter 5/21/84

E. Current Status (as of 9/10/84)

Additional monitoring of present well required but no additional investigation required as yet.

F. References

Weiss Associates (2/84)
Misc. Correspondence

SAFETY-KLEEN CORPORATION
3461 Woodward Ave.
Santa Clara, CA

Site #: OG 35
File Name: B:SK

Reviewed 4/18/85

Reviewer: MCT

A. Description of Site

"The Safety Kleen Company provides a solvent supply to mechanic shops , machine shops, etc., for cleaning grease and oils. The spent solvent is collected, stored, and later shipped to a recycling center where the spent solvent is reclaimed. The Santa Clara service facility had 2 underground tanks. One held spent solvent and the other held clean solvent. Delivery trucks took clean solvent to shops and picked up spent solvent. Solvents were containerized in 16- and 30-gallon drums. The spent solvent was brought back to the facility and poured through a coarse screen into a modified dumpster. From the dumpster, the solvent flowed through a pipeline to the spent solvent storage tank. Safety Kleen has since moved to a new facility." (1). No information on length of occupancy previous owners or use in file.

No facilities questionnaire in file.

Chemicals used/stored on site (Safety Kleen letter 6/25/84 - see Attachment #2):

- Mineral Spirits
- Methylene Chloride
- TCA
- Toluene
- Perchloroethylene
- Trichloroethylene
- Phenol
- Light Aromatic Hydrocarbons
- Armohib 28
- Orthodichlorobenzene
- Cresylic Acid
- Dresinate TX
- PCB

Attachments: #1 Site Maps
#2 Chemical Composition of Clean & Used Solvents

B. Geology

Soils consist of interlayered silty clays and sands.

11 Borings; deepest 31 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs

Hydrogeology

Only one monitoring well (to 31 ft.) so little hydrogeologic information available. Shallowest groundwater (GW) encountered at 10.5 ft (1).

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: Mineral Spirits detected in soil, Perchloroethylene detected in GW.

Soil contamination - 1 chemical:

Mineral Spirits	4,600 ppm

GW contamination - 5 chemicals. Major contaminants:

Carbon Tetrachloride	670 ppb
1,1-Dichloroethane	530 ppb

Two areas with contaminated soil identified (open pit and fill pipe areas - see Attachment #5 for locations).

Attachments: #4 Lab Results
#5 Soil Contamination Map

D. Case Chronology

See Attachment #6 for list of documents in file.

4/10/84	Safety-Kleen (SK) submits closure plan to DOHS.
4/11/84	Closure begins prior to any approval (Attachment #10).
4/25/84	DOHS lists 41 violations present in closure plan - rejects.
6/84	Culp*Wesner*Culp (CWC) Phase I proposal submitted.
6/12/84	DOHS letter to SK asking for more information on chemicals used.
6/25/84	SK letter to DOHS with lists of chemicals stored on site.
7/31/84	RWQCB requires revisions in CWC's Phase I proposal.
8/8/84	CWC revisions to Phase I proposal received.
8/30/84	RWQCB approves revised Phase I proposal (Attachment #7).
10/84	Phase I report by CWC submitted. 11 Borings/1 MW. Findings: Soil, GW contamination detected.
10/17/84	PCM memo of SK site visit (Attachment #8).
11/1/84	SK letter with arguments for limiting cleanup efforts (Shallow aquifer not used, cost, adverse environmental impacts of cleanup efforts).
11/27/84	RWQCB requires additional investigation (Attachment #9).
12/4/84	PCM memo with history of problems of compliance with SK. DOHS views RWQCB as taking lead for cleanup and monitoring; DOHS has lead on closure plan (Attachment #10).
12/5/84	Meeting with SK - Phase I results, Phase II requirements discussed (Attachment #11).
1/17/85	PCM memo explaining delays with Phase II proposal (Attachment #12).
1/18/85	Well Installation and Equipment Removal Plans received.
1/22/85	PCM memo - letter needed from RWQCB explaining

	sampling on neighbor's property. CWC claims ~70% of contaminated soil on SK site.
2/7/85	RWQCB gives qualified acceptance of Well Installation and Equipment Removal Plans.
2/13/85	SK letter to DOHS with contaminated Soil Removal Plan. (received by RWQCB 3/25/85)
2/21/85	Revised Equipment Removal and Well Installation Plans received.
3/6/85	RWQCB approves ammended plans for Well Installation and Equipment Removal (Attachment #13).
3/29/85	RWQCB gives qualified approval of contaminated Soil Removal Plan.
no date	PCM memo cites delays by DOHS in approving soil removal plan (Attachment #14).

Attachments:
- #6 Logging Sheet
- #7 RWQCB letter 8/30/84
- #8 PCM memo 10/17/84
- #9 RWQCB letter 11/27/84
- #10 PCM memo 12/4/84
- #11 12/5/84 meeting minutes
- #12 PCM memo 1/17/85
- #13 RWQCB letter 3/6/85
- #14 PCM memo (no date)

E. Current Status (as of 4/18/85)

Phase II.

F. References

1. Phase I report by Culp*Wesner*Culp Consulting Engineers 10/84

MONSANTO PLASTICS AND RESINS COMPANY
2710 Lafayette Street
P.O. Box 120
Santa Clara, CA 95050

Site #: OG 36
File Name: Monsanto

Date Reviewed: 10/12/84

Reviewer: MCT

A. Description of Site

Monsanto manufactures plastics and resins (see Attachment #3 for a list of products). No information on length of occupancy, previous occupants or use in file.

Monsanto located 3,500 ft. W of the San Jose Municipal Airport runways. 8 acre development on a 25 acre site. (2)

Filter backwashing area used from the mid-60's through 1975 within a 1.5-2 acre dike area adjacent to the Southern Pacific Railroad tracks west of the process plant. Backwash material contained filtering salts mixed with amino- and phenolic-resins, and was discharged onto the soil for solar evaporation. This area was covered with 2' soil in 1975 when mfg. processes modified. Today it exists as an open field. (3) On south side of parcel is located an inactive dump site last used in the late 50's or early 60's. Variety of solid materials dumped in dumpsite: scale off of a reactor wall, totally hard or cured resin, broken pallets, and other general trash. Organics including sample jars from Quality Control Lab, drums of off-grade resin, lab solvents, etc. (2)

Backlot property sold to BTS Brokerage Company (RMB memo 3/7/84).

No facilities questionnaire in file. Environmental assessment was part of a corporate-wide Monsanto program started in the late 70's (2). Monsanto also wanted to sell backlot areas and conducted an investigation to determine possible liabilities (RWQCB memo 7/20/82).

For a list of chemicals stored on site, see Attachment #3.

Attachments: #1 Site Location Maps
#2 Site Maps
#3 List of chemicals used on site

B. Geology

Subsurface soil poorly sorted clayey alluvium with some zones of silty, clayey sand.

16 Borings; deepest 50 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Logs

Hydrogeology

2 aquifer layers defined. Shallowest GW 1.5-3.5 ft. Second permeable zone at approx. 26 ft., separated from the upper zone by 10 to 12 ft. of clay. Flow N-NW, gradient 0.4%. Hydraulic conductivity 2.0 x e-4 ft/sec in the vicinity of the backwash area. (3)

A perched zone of water saturates an underlying silty sand layer at a depth of ~10-12 ft. below ground surface (average thickness ~2 ft.) (3).

15 Monitoring Wells (MW); deepest 50 ft.; 12 MWs to "A" Aquifer, 3 MWs to "B" Aquifer.

Closest GW pumpage NE at Owens-Corning plant adjacent to the Santa Clara facility. 2 wells est. 150 & 300 ft. used for process water.

Attachments: #5 Permeability Data
#6 Groundwater (GW) elevation maps
#7 Close Municipal/Private well locations

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: Major organic compound detected in GW 5-methyl-2-hydroxy-isophthalic acid (2-hydroxy-5-methyl-1,3-benzenedicarboxylic acid or HMBA - CAS reg. no. 40617-52-5), with concentrations as high as 827 ppm. (3) HMBA appears to have resulted from the oxidation of Resinox-514 (Monsanto in-house letter 7/19/82), a product manufactured on site (see Attachment #3). 4 chemicals are similar enough in structure to HMBA that they are likely to have originated from the breakdown processes that produced HMBA (5). Xylene also detected in GW (used in manufacture of urea resin - see Attachment #3) but this may be from an offsite source (see below).

Soil contamination - no soil analysis performed.

GW contamination - 10+ chemicals. Major contaminants:

"A" Aquifer -	HMBA	827 ppm
	Xylene	900 ppb
"B" Aquifer -	TCE	46 ppb
	Freon 113	11 ppb

HMBA not detected in second saturated zone.

2 analyses of water from well 10A showed some organic solvents which had not been used in Monsanto processes.

Some workers became ill following inhalation of phenolic vapors during excavation to install leach line (see Spill Report 7/15/82 - Attachment #13). Original spill report mistaken - spill occurred on Monsanto site, not Owens-Corning facility (PWJ verbal communication 7/24/84).

Monsanto using dewatering system (subsurface drainage system) to clean up. Based on bioassay info, sump water deemed suitable for admission to the plant's sanitary sewer system for treatment. Concentration of HMBA in sump 170 ppm. Near-surface GW levels depressed locally because of system. (3) See Attachment #10 for graphs and maps concerning dewatering system.

In-house chemical analysis showed no GW contamination in area of sumpsite, only Phenol (394 ppb) detected in solid waste. Monsanto removed selected materials to satisfy DOHS requirements. Trench area listed with Superfund (Monsanto report 11/15/82) but no mention in file of why it is listed.

Downgradient (DG) facilities: Owens-Corning, PMI, Fairchild
Upgradient (UG) facilities: Container Corp., Technical Coatings, Pacific Nursery Pots, Memorex

Nearest UG facility Technical Coatings - common contaminants Xylene, Ethylbenzene, and Toluene might have migrated (Levels at Technical Coatings from 250 times for Xylene and Ethylbenzene to 10,000 times as high for Toluene).

Attachments: #8 Contamination summary - backwash area
#9 Contamination summary - dumpsite
#10 Dewatering system graphs/maps
#11 Toxicity information on HMBA

D. Case Chronology

<NOTE: For a more detailed case chronology from 1950's to 1/30/84 see Attachment #12>

Subsurface investigation part of a corporate-wide Monsanto program started in the late 70's.

12/11/81	"Phase I - Field Exploration of Groundwater Monitoring Wells and Lab Testing" completed by Cooper & Clark. 7 borings/6 MWs constructed; deepest boring 40 ft., deepest MW 30 ft. Findings: no chemical analysis, only hydrogeologic data.
4/7/82	"Phase II - Field Exploration ..." completed by Cooper & Clark. 5 additional borings/MWs constructed. Findings: no chemical analysis, only hydrogeologic data collected.
5/7/82	"Phase III - Field Exploration ..." completed by Cooper & Clark. 4 additional borings/MWs constructed. Findings: no chemical analysis but chemical odors noted in some wells at 10-15 ft.
5/13/82	Monsanto in-house acute toxicity report on GW sample completed. Findings: Oral LD50 (rats) - >50,100 mg/kg, Dermal LD50 (rabbits) - >5,010 mg/kg. GW considered essentially non-toxic.
7/15/82	Spill Incident Report (see Attachment #13)
7/19/82	Monsanto in-house letter identifies major GW contaminant as HMBA.

10/21/82 Monsanto buried trench investigation report to DOHS received by RWQCB. Findings: No contamination in back-lot areas but no analytical results to back it up.

10/26/82 DOHS letter to Monsanto asks for more information

11/15/82 Monsanto report to DOHS with information to back up 10/82 report completed.

11/24/82 Monsanto letter received by RWQCB stating major GW contaminant (60-80%) HMBA.

5/18/83 Monsanto in-house report completed. Findings: GW contamination and hydrogeologic information.

5/26/83 Emcon report to Monsanto completed. Findings: summary of work done.

3/26/84 Emcon report to RWQCB received with case chronology (Attachment #12) and quarterly monitoring.

6/14/84 Emcon Remedial Action Plan Alternatives report received by RWQCB.

6/26/84 RWQCB letter stating Monsanto should more clearly define plume before discussing remedial action plan alternatives. Color extinction value test considered unacceptable because of lack of quantification for different chemicals. Monsanto required to synthesize HMBA analytical standard and to use standard in analysis of on and off-site wells.

7/9/84 Monsanto synthesizes analytical standard for HMBA

8/16/84 Emcon Associates "Plume Definition Plan" received by RWQCB. Findings: suggests Toluene, Ethylbenzene, and Xylene contamination from an offsite source.

9/18/84 Emcon letter received by RWQCB detailing proposed analytical method for presence of HMBA.

9/19/84 Cooper & Clark letter to BTS Brokerage asks permission to construct MWs on backlot property for Technical Coatings investigation.

Attachments: #12 Case Chronology (by Emcon Associates)
#13 Spill Incident Report 7/15/82
#14 PWJ memo 7/20/82
#15 RWQCB letter 6/26/84

E. Current Status (as of 10/12/84)

Ongoing Phase II. Monsanto to use new analytical method for detection of HMBA to define plume at on and off-site wells.

F. References

1. Cooper & Clark "Phase I" report 12/81
" " " "Phase II" report 4/82
" " " "Phase III" report 5/82
2. Monsanto Research Corporation Buried Trench Investigation 10/82
3. Monsanto Research Corp. Groundwater Assessment Study 5/83
4. Emcon Associates Remedial Action Plan Alternatives 6/84
5. " " Plume Definition Plan 8/84
6. " " progress report to Monsanto 8/83
Misc. correspondence

VERBATIM CORPORATION
360 N. Pastoria Ave, Sunnyvale 94086

Site #: OG 38
File Name: Verbat2

Facility: 1 manufacturing bldg, 1 office bldg
Date Reviewed: 8/9/84
Reviewer: LK

A. Description of Site

Bldg constructed 1975, owned by Aetna Life Insurance Co., managed by Koll Co., leased to Verbatim Corp.
Verbatim has been sole occupant of site.
Verbatim does not manufacture silicon wafers; operations on site not specified

2 8000 gal underground non-vaulted non-waste storage tanks; installed 1976; contain Tetrahyrofuran.
6 above ground non-vaulted treatment units; installed 1976,1979.

Chemicals used on site: Tetrahydrofuran, Freon-TF, Isopropyl alcohol(IPA). Does not use acids in treatment units

Attachments: #1 - Site Location Map
#2 - Correspondence Verbatim to RWQCB
#3 - Facility Questionnaire

B. Geology

Verbatim facility is underlain by low permeability silty clay, a sand and gravel bed, and silty clay.
2 borings on site to depth of 40 and 46 ft.
Soil Classification per Risk Assessment Question # 11.

Attachment: #4 - Boring Logs and Key, 4 pgs

Hydrogeology

2 monitoring wells on site; MW-1 located upgradient of underground storage tank, MW-2 located downgradient and East side of bldg.
1 aquifer defined for Project Area (Xidex, Verbatim, Data General Zymos); water bearing layers approx. 12-24 ft, increasing downgradient.
Shallowest groundwater (GW) = 22.08 ft, MW-1.
GW flow direction in Project Area is N-NE, from Xidex to Zymos.
GW gradient is very flat = .0035 to .007 ft/ft with <1 ft vertical fluctuation reported in GW elevations.
Conductivity varies between e+3 g/d/sq ft for water bearing sand and gravels, and e-3 g/d/sq ft for interlayered clays and silt. Vertical GW flow is restricted by clay and silt layers resulting in perched GW tables. (per Converse Consultants, Ref #3)

Attachments: #5 - Monitoring Well Sites
#6 - Hydrogeology Data, 2 pgs

C. Contamination

See Risk Assessment Chemical Properties: Questions 1,2,3,4.

For chemicals used on site:
Tetrahydrofuran <1 ppb in soil, 2500 ppb in GW
Freon isomers <1 ppb in soil, <100 ppb in GW
IPA not analyzed in soil or GW;
degradation product Acetone = <50 ppb in GW.

Soil contamination = 2 chemicals; 1 detected at both wells:
Toluene 11 ppb MW-1 20ft, 7 ppb MW-2 10ft
Xylene 3 ppb MW-1 15ft

GW contamination = >10 chemicals; 11/82 analysis shows 3 major contaminants increasing in concentration from MW-1 to MW-2, along GW flow:

Methylene Chloride (Dichlorormethane)	2,600 MW-1	14,000 MW-2
Thio-bis-methane (Dimethyl sulfide)	4,606 MW-1	7,000 MW-2
Chloromethane (Methyl Chloride)	ND MW-1	49 MW-2

Other chemicals detected decrease in concentration along flow.

MW-1 most contaminated; located upgradient from Verbatim storage tank; downgradient from Xidex tank farm and site of major contamination at Xidex; chemicals used on site at Xidex include 2-Methoxyethanol, 1-Methoxy-2-Propanol, Methylene Chloride.

RWQCB Plume maps suggest on-site contamination for Tetrahydrofuran; off-site contamination of 2-Methoxyethanol, Methylene Chloride 1-Methoxy-2-Propanol.

Plumes for Methylene chloride, 1-Methoxy-2-Propanol, and 2-Methoxyethanol extend from Xidex to Data General since detection limits range from 10,000 - 25 ppb, and no clear perimeter defined.

Attachments: #7 - Soil and GW Verbatim Analysis 11/82, 2 pgs
#8 - Soil and GW Verbatim Analysis 4/84, 4 pgs
#9 - Chemicals used at Xidex
#10 - RWQCB Plume Maps, 4 pgs

D. Case Chronology

5/11/82 Facility Questionnaire completed 5/11/82 for Leak Detection Program (Attachment #3)

12/30/82 Phase I Subsurface Investigation by EMCON Asso
Findings: soil and GW contamination (Attachment #7).
Source and extent inconclusive; directed by RWQCB to work as Project Area - Xidex, Verbatim, Data General, Zymos - to define contamination.

4/84 Phase II Plume Identification for Project area by Leland Attaway & Asso
Findings: hydrogeologic data defined for Project Area, GW analysis only (Attachment #5);
Xidex contamination and hydrogeology discussed;

Verbatim on-site contamination of Tetrahydrofuran not well identified (i.e., ? tank leak);
Contaminants cluster around Xidex and Verbatim, and Data General and Zymos.
Plume maps not drawn by LDA&A for Project area

Current Status

6/84 RWQCB continuing follow-up with Verbatim re: contamination and clean-up.

F. References

1. EMCON Associates Report 12/82.
2. Leland D.Attaway & Asso Report 4/84.
3. Converse Consultants for Xidex 3/83.

TANDEM COMPUTERS Site #: OG 39
19333 Vallco Parkway, Cupertino File Name: B:Tandem

Reviewed 5/84;4/2/85, 5/31/85 Reviewer:LAP/MCT MCT

A. Description of Site

Site is a computer manufacturing facility. From 1974 to 1978 Four-Phase Systems operated the site. During this time subsurface storage tanks containing organic solvents were used (2).

In 1978, Four-Phase vacated the Vallco Parkway site and leased it to Tandem Computers, Inc (2). Although Tandem assembles computer parts at the Vallco site, they reportedly had not used a wet fabrication process or utilized the the storage tanks previous to discovery of the site contamination (5).

Site located in a commercial park owned by Vallco Park Ltd. and occupied by high-tech light industry and retail merchants. The property is bounded to the north, south, and west by paved roadway and on the east by the channelized Calabazas Creek (2).

The facility had at one time 2 nonvaulted waste storage tanks and 2 concrete sumps. The tank and piping system was removed in December 1982 (3).

For chemicals used on site see Attachment #3 (2).

Attachments: #1 Site Maps
#2 Facilities Questionnaire
#3 Chemicals used on site

B. Geology

Upper 20-25 ft. of soils consist of slightly moist to moist silty and sandy clay with occasional thin (1-3 ft.), discontinuous lenses of silty sand and sand. Below this, a 15-30 ft. thick zone of dry to slightly moist gravelly sand or sandy gravel, containing clay in varying amounts, exists. These two units, with slight variation in minor constituents, repeat in a relatively regular alternating pattern with depth (2).

25 borings; deepest 280 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Logs
#5 Geologic Profiles

Hydrogeology

Relatively permeable sandy gravel and gravelly sand units are found at the following depth intervals (2):

25-35 ft.
60-70 ft.
90-105 ft.
120-135 ft.
180-200 ft.
225-250 ft.

Units above 180 ft. are less continuous than those below; units above 150 ft. are dry (2).

Shallowest groundwater (GW) encountered at 127.7 ft. (48.7 ft. above MSL) (2). GW flow NE (2). Because GW was not present where organic compounds were found, aquifer tests were not conducted (2).

Site lies in the "forebay zone" of the Santa Clara Valley GW Basin; it is classified by the SCVWD as an unconfined area in which GW flow is vertically unrestricted and a water table condition results (2).

2 Monitoring Wells (MW) but only one to depth of GW (slotted interval 186-206 ft.).

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: Xylene, TCE Ethylbenzene, Freon, n-Butyl Acetate detected in soil. No GW contamination detected.

Soil contamination - 11 chemicals. Major contaminants:

TCE	130 ppm
Xylene	34 ppm

GW contamination - none detected.

Source of contamination determined to be piping. Estimated leak time is assumed to be from 1974 to the time of tank removal (1982) (3).

There are two localized areas within the subsurface soils contaminated mainly with TCE:

- a small thin lens immediately below the tank excavation at a depth of about 10 to 12 ft.;
- a larger lens at a depth of approximately 50-60 ft.

The thickness of the shallow lens is five feet of silty clay soil. The total volume of soil contaminated in this area is approximately 50 cubic yards. The deeper lens is estimated to be 15-20 ft. thick with maximum lateral dimensions estimated to be 50 ft. x 50 ft. The total volume of soil contaminated in this area is estimated to be 1600 cubic yards (2). Soil between the lenese contain very low levels of TCE (4). It is estimated that less than ten gallons of TCE is present in the larger lens at 50-60 ft. (5).

A stormdrain sample tentatively identifying several chemicals (Attachment #7) thought to be unrelated to storage tank investigation - no known sources identified (2).

Converse Consultants have completed surface sealing procedures on site (Attachment #11).

A vacuum extraction program has been proposed as remedial measure (4).

Attachments: #6 Lab Results
#7 Stormdrain Sample Results
#8 Contamination Profile
#9 Contamination Maps

D. Case Chronology

Leak Detection Program 1982

7/26/82	Facilities Questionnaire received.
12/82	Underground solvent storage tanks removed and contaminated soils surrounding and below the tanks excavated (to a depth of 10 ft.).
12/82	Emcon Phase I investigation performed. 1 Boring/MW constructed to 56.5 ft. - no GW encountered. Findings: soil contamination detected. (Report not in file - referenced in Converse report 8/83)
2/10/83	Phase I Proposal by Henningson, Durham, and Richardson submitted.
8/15/83	Soil/GW Investigation by Converse Consultants, Inc. received. 17 borings; deepest 280 ft. 1 MW constructed. Findings: soil contamination but no GW contamination detected.
9/1/83	RWQCB letter to Mayor of Cupertino discusses time frame for contamination extent definition and cleanup (Attachment #10).
9/28/83	Remedial Plan Alternatives by Converse Consultants completed. Five remedial plan alternatives discussed.
11/4/83	Contract Documents for Surface Sealing by Converse Consultants submitted.
2/2/84	Landels, Ripley, and Diamond (attorneys) letter completed with attached supplemental sampling program by Converse dated 1/24/84 (Attachment #11). Converse letter notes completionof surface sealing of site.
5/23/84	Soil-Gas and GW Monitoring by Converse Consultants received. 2 borings to 105 ft. installed. Air stripping tests done on soils.
5/24/84	SCH memo summarizes meeting with Four-Phase and Converse Consultants - vacuum extraction program discussed.
9/6/84	Technical Proposal - Vacuum Extraction Program by the MARK Group completed.
5/14/85	Tandem comments to 205j case summary received.

Attachments: #10 RWQCB letter 9/1/83
#11 Converse letter 1/24/84
#12 SCH memo 5/29/84

E. Current Status (as of 4/2/85)

Ongoing Phase II. Vacuum extraction system under installation (5/6/85) (5).

F. References

1. Phase I report by Emcon 12/82
2. Soil/GW Investigation by Converse Consultants 8/83
3. Soil-Gas and GW Monitoring by Converse Consultants 5/84
4. Technical Proposal - Vacuum Extraction Program by the MARK Group 9/84
5. Tandem comments on 205j case summary 5/7/85

STANFORD CLEANERS
2875 El Camino Real
Palo Alto, CA. 94304

Site #: OG 40
File Name: B:Stanford

Date Reviewed: 3/6/85
Reviewer: MCT

A. Description of Site

No information on operations, length of occupancy, former occupants or use in file.

1 - 550 gal. non-vaulted solvent storage tank on site storing Shell 140 F cleaning solvent.

Attachments: #1 Site Maps
#2 Facilities Questionnaire

B. Geology

Soils beneath site interbedded silt, sand, clay, and gravel lenses. No competent clay layer (>5 ft. thickness) identified (1).

1 Boring to 41.5 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Log

Hydrogeology

Only 1 monitoring well (MW) to 41.5 ft. so little hydrogeologic data available. Shallowest groundwater (GW) encountered 15.7 ft. (1).

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: Stoddard solvent detected in both soil and GW.

Soil contamination - 1 chemical:
Stoddard Solvent 460 ppm

GW contamination - 1 chemical:
Stoddard Solvent 43 ppb

RWQCB has determined probable leakage from underground solvent tank (Attachment #7).

Attachments: #4 Lab Results 1/83
#5 Lab Results 1/84

D. Case Chronology

Leak Detection Program 1982.

5/18/82	Facilities Questionnaire received
11/22/82	Dames & Moore proposal for subsurface investigation received.
11/24/82	RWQCB accepts Dames & Moore proposal.
1/6/83	RWQCB letter requiring resampling of GW using EPA method 625 with deadline for sampling results 1/6/84 (Attachment #6). (date on letter might be typographical error)
2/8/83	"Subsurface Investigation to Evaluate the Integrity of a Subsurface Tank" report by Dames & Moore received. 1 Boring/MW constructed to 41.5 ft. Findings: Stoddard Solvent detected in soil, ND in GW (detection limit 0.2 ppm).
3/23/83	RWQCB letter requires additional investigation based on probable leakage from solvent tank (Attachment #7).
1/30/84	GW resampling results by Dames & Moore received. Findings: Stoddard Solvent detected in GW.

Attachments: #6 RWQCB letter 1/6/83
#7 RWQCB letter 3/23/83

E. Current Status (as of 3/6/85)

Phase II.

F. References

1. "Subsurface Investigation to Evaluate the Integrity of a Subsurface Tank" report by Dames & Moore 2/83
2. GW resampling results by Dames & Moore 1/84

VAN WATERS & ROGERS
2256 Junction Avenue
San Jose, CA 95131

Site #: OG 41
File Name: B:VWR

Date Reviewed: 10/15/84

Reviewer: MCT

A. Description of Site

VWR is a division of Univar. VWR began construction at this site in 1976. No specifics on site operations in file. Prior use for agriculture. (2)

36 non-vaulted underground tanks on site; 18-6,000 gal capacity, 18-10,000 gal capacity. Use of tanks began 4/77. For list of chemicals stored and/or handled on site see Attachments #3A and #3B.

Attachments: #1 Site Location Map
#2 Facilities Questionnaire
#3A Chemicals stored/used on site
#3B Chemicals handled but not stored on site

B. Geology

Site underlain with about 40 ft. of silty clay with sand and gravel lenses underneath which lies a layer of sand and gravel.

22 borings; deepest 60 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Logs
#5A Soil Profile - Phase II report
#5B " " - Phase III report

Hydrogeology

SWRCB (memo, 8/2/83) notes 3 aquifers encountered during Phase II investigation:

"A" aquifer 7-15 ft.
"B" aquifer 25-31 ft.
"C" aquifer >50 ft.

Shallow aquifer data*:
Water levels 4-6'.
Average hydraulic gradient 0.3%; gradient in tank area 0.7%.
Groundwater (GW) flow NW
Velocity 0.01 ft/day.(2)
Average hydraulic conductivities in shallow water bearing zone 7.22 ft./day (0.00255 cm/sec) (3).
Average pore water velocity 19.8 ft/yr.
Dispersion coefficient 50 ft2/yr.

Soil has high secondary permeability due to numerous root holes and silt filled fissures. (3)

Piezometric head in deeper sand & gravel aquifer (MW #7) ~0.5 ft. lower than for wells in shallow water bearing zone. There does not appear to be a well defined layer preventing seepage of water from the shallow water bearing zone down to the sand & gravel aquifer at 45-50 ft. depth. (3)

Well #7 thought to be tapping a buried stream channel (sand and gravel layer 75 ft. thick) which underlies the VWR site at about 45 to 60 ft. in depth. (3)

(* Consultants treat aquifers "A" & "B" as one shallow water bearing zone. Consultants state in Phase III report that there is no conclusive evidence of a gravel layer within the upper 20 ft. of soil. They state that the gravel encountered in boring #3 between 3 & 11 ft. is tank cavity fill, not native soil.)

SWRCB thinks gradient analysis inadequate in Phase II report (see Attachment #8).

16 Monitoring Wells (MWs); deepest 60 ft.

Attachments: #6 Monitoring Well details
#7 GW contour map
#8 State Water Resources Control Board memo 8/83

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored and/or handled on site - following chemicals detected in both soil and GW:

1,1,1-TCA
Hexane
Xylene
Methanol
Methylene Chloride
Acetone
Toluene
Styrene
TCE
Methyl Isobutyl Ketone
Ethylene Glycol
Tetrachloroethylene
Isopropanol
Methyl Ethyl Ketone

Chloropicrin found in soil only.

Pesticides handled but not stored here. RWQCB Monitoring Report 3/21/83 (Attachment #13) showed 1600 ppb Chlordane, 590 ppb Malathion, 400 ppb Diazinon, 80 ppb Lindane in storm drain.

Soil contamination - 10+ chemicals. Major contaminants:

Methanol	1,600 ppm
Isopropanol	1,400 ppm

GW contamination - 10+ chemicals. Major contaminants:

Aquifer "A" -	Methanol	1,300 ppm
	Isopropanol	500 ppm
Aquifer "B" -	Methanol	8,600 ppm
	Ethylene Glycol	2,700 ppm
Aquifer "C" -	Acetone	890 ppb
	Methylene Chloride	800 ppb

Aquifer "C" not tested for Methanol, Isopropanol, or Ethylene Glycol.

No pesticides or gasoline detected in soil or GW by consultants - Sonia Low of DOHS detected pesticides in soil near railroad spur during 3/21/83 inspection.

Source of contamination not clearly identified. Phase II report suggests that leaks from pipelines are more likely than from tanks; Phase III report states that pipes involved in loading and unloading chemicals from rail tank cars are suspected as possible sources of contamination.

Downgradient (DG) facilities: IMP, San Jose Graphics. N/C at San Jose Graphics. Slight contamination at IMP (Methylene Chloride highest GW contaminant at 22 ppb) - VWR might be source of contamination (VWR plume seems to migrate DG offsite).

Attachments: #9 Summary of Soil & GW analyses
#10 Phase II Lab Results
#11 Selected Phase III Lab Results
#12 RWQCB Plume Maps
#13 RWQCB Monitoring Report

D. Case Chronology

Leak detection program 1982

5/20/82 Facilities Questionnaire completed

2/9/83 Phase I subsurface investigation by Dames & Moore received by RWQCB. 3 Borings/MWs constructed. Findings: Massive Soil & GW contamination.

3/21/83 Sonia Low of DOHS inspects VWR site and finds pesticides in soils and storm drain.

4/27/83 D'Appolonia Consulting Engineers, Inc. retained by VWR (2)

4/28/83 DOHS letter detailing 20 alleged violations of California Hazardous Waste Control Act and Regulations noted during 3/21/83 inspection sent to VWR.

5/10/83 SWRCB memo of comments on Phase I study.

5/20/83 DOHS letter to VWR states that the RWQCB investigation requirements satisfy their Plan of Correction requirements - they request copies of any information sent to RWQCB.

5/27/83 VWR letter lists chemicals handled but not stored on site.

5/27/83 DOHS letter questions whether soil samples were adequatly preserved prior to analysis.

6/7/83 D'Appolonia letter addresses reservations of soil sampling procedure raised by DOHS.

6/26/83 Phase II subsurface investigation report by D'Appolonia Consulting Engineers received by RWQCB. 5 Borings/MWs constructed. Findings: Soil & GW contamination. MW#7 (deeper aquifer) showed decreased contamination.

8/2/83 SWRCB memo comments on Phase II report.

8/12/83 RWQCB letter comments on Phase II investigation and gives requirements for additional investigations.

8/19/83 Phase III proposal received by RWQCB.

9/6/83 RWQCB suggests revisions to proposal.

9/29/83 Revised Phase III proposal recieved by RWQCB.

12/7/83	"Phase III" subsurface investigation by D'Appolonia completed. 14 Borings/8 MWs constructed. Findings: Further definition of plume, hydrogeologic data collected.
4/16/84	Proposal for further investigation and Remedial Action Feasibility Study by IT Corp. received by RWQCB.
8/24/84	Approval of above IT proposal by RWQCB.
9/6/84	RWQCB memo states 6 tanks to be tested in following two weeks.
9/14/84	VWR letter of proposed offsite MW construction recieved by RWQCB.

E. Current Status (as of 10/15/84)

Ongoing Phase II.

F. References

1. Dames & Moore Phase I report 2/2/83
2. D'Appolonia Consulting Engineers Phase II report 6/83
3. " " " Phase III report 12/83

   Misc. Correspondence

HEWLETT-PACKARD/Stanford Park Division Site #: OG 42
395 Page Mill Road File Name: B:HP-395
Palo Alto, CA

Date Reviewed: 2/28/85 Reviewer: MCT

A. Description of Site

No information on operations, length of occupancy, former occupants or use in file.

Site has:
- 4 vaulted storage tanks
- 1 non-vaulted waste tank (removed 5/82)

Object of investigation one solvent storage tank (1000 gal capacity, in use since 1976). Tank site is an open asphalt-paved area east of Bldg. 7C and southwest of Bldg. 12. From 5/76-5/82 tank stored (1):

1,1,1-Trichloroethane	Paint Thinners
Methyl Ethyl Ketone	Hydraulic Oils
Isopropanol	

Tank was abandoned 5/82 and filled with water and a 1/4" layer of soil poured on top to prevent evaporation. Monitoring of water level from 5/82-11/82 showed no detectable change . Tank presently filled with water (1).

Attachments: #1 Site Maps
#2 Facilities Questionnaire

B. Geology

Site underlain by interlayered sands, gravels, silts, and clays.

One boring (65.5 ft.) in this study. Consultants site previous foundation study by Cooper & Clark (11/6/74) in which a 41 ft. deep boring (CC-4) but log for this boring not in file (see Attachment #1 for location).

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Log
#4 Geologic Cross Section

Hydrogeology

Only one Monitoring Well (MW) constructed (to 65.5 ft.) so not much hydrogeologic data available.

Two aquifers defined (1): 12.5-24 ft.
37-65.5 ft. (BOH)

Shallowest groundwater (GW) at 13.5 ft. GW flows northeast to San Francisquito Creek (1).

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: TCA detected in both soil and GW.

Soil contamination - 3 chemicals. Major contaminants:

TCE	200 ppb
TCA	12.4 ppb

GW contamination - 4 chemicals. Major contaminants:

1,1-DCE	12.3 ppb
TCA	10.7 ppb

TCA detected but not quantifiable in deep aquifer (see Attachment #7) (1).

Lab results from GW sampling 11/30/83 (Attachment #6) showed several compounds detected in both GW samples and blanks which brings into account issues of quality assurance associated with the analytical lab. Chemicals which had comparable concentrations in both the GW sample and blank were disregarded with respect to the Risk Assessment.

No information on possible sources of contamination in file.

Attachments: #5 Lab Results 8/83
#6 Lab Results 2/84
#7 Contamination Information 8/83

D. Case Chronology

Leak Detection Program 1982

6/3/82	Facilities Questionnaire received.
8/12/83	Subsurface Investigation by Applied Earth Consultants (AEC) completed. 1 boring/MW constructed (65.5 ft.) Findings: soil & GW contamination detected.
9/12/83	DME memo with comments on AEC report and request to resample using EPA method 624 and an independent lab.
12/20/83	DOHS letter to HP with Notice of Violations (Attachment #8)
2/3/84	HP letter to SCH with latest round of GW sampling results (Attachment #6).
9/5/84	RWQCB letter to HP requiring further investigation and agreeing to abandonement of underground tank (Attachment #9)

Attachments: #8 DOHS letter 12/30/83
#9 RWQCB letter 9/5/84

E. Current Status (as of 2/28/85)

Ongoing Phase II.

F. References

1. "Subsurface Geologic Investigation and Sampling" by Applied Earth Consultants 8/12/83

PRECISION MONOLITHICS, INC.
1500 Space Park Drive
Santa Clara, CA 95050

Site #: OG 43
File Name: PMI

Date Reviewed: 9/24/84

Reviewer: MCT

Facility: 4 Buildings

A. Description of Site

PMI, an integrated circuit manufacturer, has been in operation at this location since 1969. Early operations were limited to Bldg.1. Bldg.2 was constructed for PMI in '77, Bldg.3 occupied in '80, Bldg.4 occupied in '82 (Bldg. 4 currently under long-term lease to PMI). Manufacturing operations primarily in Bldgs 1 & 2. Limited Manufacturing in Bldg 3; no mfg. in Bldg 4. No info on previous use of site. (1)

'69-'75 Non-solvent wastes disposed into old acid neutralization system South of Bldg 1. '75 acid neutralization system and one waste solvent tank were installed. 2nd tank installed '77. '83 both waste solvent tanks drained and no longer in use. Wafer fabrication area in Bldg 1 (c) and 2 - piping systems run from Bldg 2 to a trench leading to existing acid neutralization system and waste solvent storage tank. (1)

2 non-vaulted underground solvent waste tanks on site no longer in use (c) - chemicals previously stored include: Xylene, N-butyl Acetate, Stoddard Solvent, Acetone, Isopropyl Alcohol (IPA).

There are two treatment units on site, one vaulted tank (in use) and one non-vaulted tank (not in use). Also, there is a concrete sump which holds water rejected from the deionized water system. (c)

Attachments: #1 Site Location Map
#2 Site Map with Monitoring Well (MW) locations
#3 Facilities Questionnaire

B. Geology

Site underlain by interlayered silty clays and sands.

26 Borings; deepest 72 ft.

Soil classification per Risk Assessment Question #11

Attachments: #4 Boring Logs
#5 Soil Profiles

Hydrogeology

Report indicates two aquifer layers.
"A" aquifer 15-40', probably laterally contiguous.
"B" aquifer range not well defined.
Thickness of fine-grained material separating A & B varies from a few feet to over 100 ft. (2) The shallow aquifer zone (15-100 ft.) is separated from the deep aquifer zone (150-900 ft.) by a massive clay aquiclude (3).

Shallowest groundwater (GW) 7.19 ft. Hydraulic Gradient in shallow aquifer 0.2%. GW flow N-NE. (2) GW velocity inferred from bail tests to range from 1 to 250 ft/yr (see Attachment #6)(3). North of Space Park Drive GW flow becomes radial with gradients to both the northwest and northeast (Attachment #8) (3).

Peizometric elevations in "B" aquifer wells consistently measured at approximately 4 ft. higher than the immediately adjacent "A" aquifer, reflecting an upward hydraulic gradient between aquifers and at least partial hydraulic separation of the two aquifers (3).

13 MWs; deepest 72 ft. (see Attachment #6)

See Attachment #9 for information on wells in vacinity of site.

Attachments: #6 MW construction and aquifer data
#7 GW levels
#8 GW contour map
#9 Information on nearby wells

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: Freon 113, IPA, 1,1,1-TCA, Methylene Chloride, Acetone, Xylene found in GW; Freon, TCE, TCA, and Stoddard Solvent found in soil.

Soil contamination - 7 chemicals. Major contaminants:

Stoddard Solvent	630 ppm
1,2,4-Trichlorobenzene	8 ppm

Many chemicals detected in GW were not detected in soil (c).

GW contamination - 10+ chemicals. Major contaminants:

Acetone	200 ppm
Isopropyl Alcohol	110 ppm

Highest concentrations in soil and shallow aquifer present near the old acid neutralization system and industrial waste lines (2). Bis(2-ethylhexyl)phthalate (12 ppb) and Toluene (21 ppb) detected in "B" aquifer (Attachment #12) but PMI disputes these findings (c).

Both Acetone & IPA have very localized contamination - only two MWs in vacinity of old acid neutralization system show contamination for these chemicals. TCE and 1,2-DCE show more widespread contamination - might be migrating downgradient (DG) to Fairchild (plume extends offsite) but not enough data to confirm (3). Harding Lawson Associates believes it is "extremely unlikely" that PMI is the source of contamination for Fairchild based on levels of contaminants, prescence of chemicals unique to PMI (see Attachment #15), and directions of GW movement, although they admit that contamination has migrated offsite (2).

Source of contamination seems to be old acid neutralization system, though there was some evidence that piping to solvent tank was a minor source and some evidence that unknown operations prior to owner aquisition of site in 1969 was a source (RKM determination - see Attachment #14).

N-butyl acetate used since about May 1980 but not found in GW collected in Phase I and Phase II studies. TCE not used after 1976. (1)

DG facilities: Fairchild
Upgradient (UG) facilities: Technical Coatings, Container Corp., Monsanto, Pacific Nursery Pots, Owens-Corning, Memorex

Nearest UG facility Owens-Corning - no chemicals seem to be migrating from there (MCT determination).

Attachments: #10 Phase I and II GW results
#11 Phase I and II soil results
#12 Emcon Lab Results
#13 RWQCB Plume Maps
#14 RKM memo (no date)
#15 Harding Lawson contamination data

D. Case Chronology

Leak Detection Program 1982

5/28/82	Facilities Questionnaire completed
2/22/83	Precision Monolithics Phase I investigation completed (in-house study). 5 borings; 3 MWs constructed. Findings: GW and soil contamination detected.
6/9/83	Harding Lawson Associates Phase II proposal completed.
9/83	Harding Lawson Associates Phase II subsurface investigation completed. 7 borings; 4 MWs constructed. Findings: Contamination suspected to have migrated offsite.
6/84	Emcon Associates report completed for ongoing Phase II investigation. 6 boring; 6 MWs - two wells (#8,9) deep wells to "B" aquifer. Findings: Additional hydrogeologic data (see above), "B" aquifer shows very little contamination.
9/4/84	RWM memo states PMI having dificulty getting permission from landlord to drill offsite.

9/14/84 RKM letter states new MWs to be constructed on City of Santa Clara property northeast of PMI facility. PMI has tentatively scheduled a pump test to begin in one month as part of engineering study.

Attachments: #16 RKM draft letter 9/14/84

E. Current Status (as of 11/24/84)

Waiting for PMI to submit new schedule for completion of following work items:

1. Removal of two solvent tanks.
2. Removal of old acid neutralization tank.
3. Installation of two new MWs; sampling these wells and an existing well on the former Fairchild site.
4. Begin a feasibility study on GW extraction/treatment as a means to contain and clean up the GW contamination.

Four MW's to be installed during week of November 26, 1984; carbon absorption interim treatment unit installed November 12, 1984 as part of feasibility study (c).

References

1. Precision Monolithics, Inc. Phase I report 2/22/83
2. Harding Lawson Associates Phase II report 9/83
3. Emcon Associates Ongoing Phase II report 6/84
Misc. Correspondence

Great Western Chemical Company
945 Ames Ave, Milpitas 95035

Site #: OG 44
File Name:GWCC

Facility: 1 Bldg
Date Reviewed: 7/84;3/85;5/85

Reviewer: LK

A. Description of Site

GWCC purchased property 1979; operations on site = chemical packaging and distribution facility.
Previous occupant serviced electronic industry for 14 yrs.
Historical use of land = agricultural.

8 7500 gal underground non-vaulted solvent storage tanks, installed 1970.

Chemicals stored in underground tanks currently:
Isopropyl alcohol(IPA), Acetone, Butyl cellosolve, Methanol, Ethylene glycol.
Past use (time unspecified) - Methyl ethyl ketone cyclohexanone, Butyl acetate.
Toluene stored for a reported 6 mos 1982.
Chlorinated solvents stored above ground in drums:
Trichloroethylene(TCE); 1,1,1-Trichloroethane (TCA); Perchloroethylene (PCE); Methylene chloride

12/83 GWCC no longer handled chlorinated solvents in bulk quantity.

Downgradient facility = Pierce & Stevens Chemical Corp; Larsen Pallet Co; upgradient (& east) facility = Quality Transformer & Electronics.

Attachments: #1 - Site Location Map
#2 - Facility Map, 2 pgs
#3 - Facility Questionnaire, 5 pgs
#4 - Chemicals On-Site, 2 pgs

B. Geology

Unconsolidated deposits of gravel, sand, silt and clay. No competent clay layer identified. Laterally continuous sand and gravel layer 2-12 ft thick on site at depth of ~25 ft. Sand and gravel unit 2 ft thick identified at 52 ft depth near well G4.
Deepest Boring = G-9, 120 ft.

Soil Classification per Risk Assessment Question # 11.

Attachment: #5 - Geologic Cross Section, 2 pgs
#6 - Boring Logs, 9 pgs

Hydrogeology

3 aquifers sampled.   9 GW monitoring wells on site.

A aquifer = 16-28 ft; B aquifer = 52-54 ft; C = 85-92 ft
Shallowest GW = 7 ft, G-8, 2/20/85
GW flow direction = NW
Gradient = .0056 ft/ft per Levine-Fricke, Inc. 3/84 Report.
Shallow hydraulic conductivity = 1600-1700 gpd/sq ft(210-220ft/d)
Deep hydraulic conductivity = 25 gpd/sq ft

22 water wells within 1.5 mile radius in the downgradient direction of the site; 1 may have been used to supply water to a school; 1 may have been used for municipal water supply.

Attachment: #7 - Hydrogeologic Data   7 pgs
#8 - Wells Near Site   13 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions #1,2,3,4.

Total chemicals in GW = >10   soil = >10

2/83 Major contamination for GW found at well 3, NW corner facility, DG from tank farm; major soil contamination near well 1 at 15.8 ft (ppb):

	GW	soil
TCE	300,000	11,000
1,1,1-TCA	260,000	6,800
PCE	22,000	2,100
1,1-DCE	22,000	1,200
Toluene	2,700	120

8/83 EMCON installed E-1 midway between GWCC and P&SCC to monitor the GW between the two companies.
GW and soil contaminated detected by EMCON at E-1;
However Stoner Lab detection limit = 100-1500 ppb for chemicals stored on site, and chemicals = less detection limit in soil.
Acurex Lab = <1 ppb detection limit in soil.
GW contamination primarily chlorinated compounds with higher detection on GWCC site and decreasing downgradient on P&SCC site.

10/83 GWCC planned to drain collection sump servicing above ground storage tanks and examine integrity.

Reports 2/83 and 6/83 not well detailed. More completed info from EMCON 8/83 report for P&SCC.
Plume Maps not included in EMCON report.

3/84: Levine-Fricke (LF) Report showed decrease concentration in GW, increase concentration in soil for TCE and TCA (ppb):

	GW	Soil
TCE	129,000 G3	15,000 G4 21 ft
	104,000 G2	
TCA	127,000 G2	1,400 G4 21 ft
	97,000 G3	
Methylene chloride	13,000 G5	54,000 G4 21 ft

Individual GW data for wells 1,2,3 not included in report; data from Plume Maps.
Methylene chloride not listed in earlier reports.

Levine-Fricke report states

1. "it is likely that a source of chlorinated solvents in the groundwater is in the immediate vicinity of the Great Western tank farm area."
2. "results of the water samples collected from deeper well G4 indicate that contamination ..at.. 52-54 ft has occurred."

2/85 LF report shows no contamination in G-9 (120 ft); contamination at G-7 and G-8 to NE.

Attachments:	#9 - Soil/GW Data Dames & Moore 2/83 Report,	2 pgs
	#10 - GW Data WCC 6/83 Report	
	#11 - Soil/GW Data EMCON 8/83 Report,	4 pgs
	#12 - Data/Maps Levine-Fricke 3/84 Report,	10 pgs
	#13 - RWQCB Plume Maps, TCE and TCA	
	#14 - Levine-Fricke Note re:Leak, Deep Aquifer Contamination	2 pgs
	#15 - Data/Maps Levine-Fricke 2/85	17 pgs

D. Case Chronology

5/5/82	Facility Questionnaire completed for Leak Detection Program
2/2/83	Phase I Subsurface Investigation by Dames & Moore Findings - soil and GW contamination
6/30/83	GW Analysis by Woodward-Clyde Consultants Findings - GW contamination; soil not analyzed.
8/10/83	Phase II Investigation by EMCON for GWCC and P&SCC Findings - soil and GW contamination at E-1; higher contamination on GWCC site
Fall '83	Phase II Investigation by Levine-Fricke 3 additional GW wells installed; B aquifer penetrated
3/84	Levine-Fricke report shows soil/GW contamination; source likely on site; B aquifer contaminated.
12/84	Phase III proposal submitted by Levine-Fricke
2/85	Levine-Fricke report no contamination G-9; contamination to NE at G-7,8

E. Current Status

1/85 RWQCB specified modifications for Phase III proposal
Notified DOHS and SCCHD of status
Considering sampling of private wells in vicinity

5/85 On Going status for plume definition

Attachments: #16 - RWQCB, DOHS Correspondence re:Status 16 pgs

F. References

1. Dames & Moore Report, 2/2/83.
2. Woodward-Clyde Consultants Report, 6/30/83.
3. EMCON Report, 8/10/83.
4. Levine-Fricke, Inc. Report, 3/84
5. Facility Questionnaire (Attachment #3).
6. Correspondence, as above.

SIEMENS COMPONENTS, INC. Site #: OG 45
Litronix Division File Name: B:Siemens
19000 Homestead Road, Cupertino

Reviewed 6/84;3/28/85 Reviewed:LAP/ MCT

A. Description of Site

Facility manufactures semiconductors (1), light-emitting diodes (Attachment #7). No information on length of occupancy, prior occupants or use in file.

Facility once maintained:
- 1 vaulted waste storage tank
- 3 nonvaulted waste storage tanks
- 1 vaulted treatment tank

Chemical storage was originally in underground tanks - solvent storage tanks removed in 1982 (2). Waste presently being stored in drums (1).

Chemicals used for production (1):

1,1,1-Trichloroethane	Methanol
Trichloroethylene	Isopropanol
Trichlorobenzene	Toluene
Hydrofluoric Acid	Hydrochloric Acid
Sulfuric Acid	

TCE was used previously, but has been totally replaced by TCA (1).

Attachments: #1 Site Map
#2 Facilities Questionnaire

B. Geology

Soil characterized by interbedded, alternating layers of coarse gravel and fine grained materials. Some sands have a relatively high percentage of silt and clay particles; thus relatively low permeability (1). There are perched watertable lenses located at 41.5, 82, and 85 ft. at borings 1-D, 3-A, and 3-B, respectively. These lenses are not thought to be laterally extensive (2).

14 Borings; deepest 91.5 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs
#4 Geologic Profiles

Hydrogeology

Aquifer layers not well defined. Shallowest groundwater (GW) at ~76 ft. (well 3-A). GW flow direction, gradient, velocity not found in file.

2 Monitoring Wells (MW); deepest 84 ft.

Attachments: #5 Hydrogeologic Data

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: TCA, TCE, Toluene, and Trichlorobenzene detected in both soil and GW.

Soil contamination - 12 chemicals. Major contaminants:

Trichlorobenzene	12,000 ppm
1,1,1-TCA	10,000 ppm

GW contamination - 16 chemicals. Major contaminants:

TCE	5.3 ppm
1,1-Dichloroethane	4.0 ppm

Organic solvents found to a depth of 80 ft. in soils in boring adjacent to former tank 3 location - GW at 82 ft. in that boring (3).

Area 1 mainly a TCE problem, Area 3 mainly a TCA, Trichlorobenzene problem (Attachment #8, see Attachment #1 for locations).

Consultants believe that there is no present "major threat" from TCE contamination identified in Area 1 causing "serious" degradation of any presently used groundwater (4).

Other facilities in area include Hewlett-Packard, Tandem/Four Phase and AMI.

Attachments: #6 Lab Results

D. Case Chronology

Leak Detection Program 1982

5/25/82	Facilities Questionnaire completed.
8/1/83	Litronix - Phase II Subsurface Investigation by Woodward-Clyde Consultants (WCC). 7 Borings/1 MW installed. Findings: Soil and GW contamination. Reference to an initial investigation by J.H. Kleinfelder & Assoc. but not in file and no date referenced in report.
8/22/83	News article about Siemens' soil contamination (no reference to which newspaper) (Attachment #7).
9/1/93	RWQCB letter to Mayor of Cupertino explaining time frame of Siemens, Four-Phase investigations & cleanup.
12/12/83	Litronix - Phase III Subsurface Investigation by WCC. 7 borings/1 MW installed. Findings: soil contamination. Only soil analysis performed.
1/10/84	SCH memo of 1/6 meeting with Siemens. Areas 2 & 4 on site considered N/A based on Phase I & II results.

2/8/84	Lab report on water found at bottom of well 1-D received. 9 Chemicals detected - highest trans-1,2-DCE (3,300 ppb).
2/24/84	Evaluation of vacuum extraction method by WCC received.
2/27/84	Estimate of Organic Contaminants in Area One Soils by WCC received. WCC believes TCE contamination not a serious threat to presently used groundwater.
3/22/84	SCH memo summarizes 2/84 reports @ Area 1 soils and vacuum extraction method.
5/16/84	SCH memo summarizes 5/16 meeting with Siemens and SCVWD.
10/9/84	Phase IV Proposal by WCC received.
11/1/84	WCC letter with lab results from well 3-A received. Findings: Trichlorobenzen, Dichlorobenzene detected.
11/1/84	SCH memo comments on Phase IV proposal and makes recommendations for further study (Attachment #8).
11/28/84	RWQCB letter summarizes 11/15 meeting, requires proposal for additional investigation by 12/5/84 (Attachment #9).
12/14/84	Proposal for additional investigation completed.
1/21/85	SCH memo summarizes proposal.
1/24/85	SCH memo documents verbal OK of next phase of investigation as described in 12/14/84 proposal.
2/22/85	RWQCB letter documents verbal conversation concerning deadlines for submittal of results from additional investigation (Attachment #10).

Attachments:
#7 News Article 8/22/83
#8 SCH memo 11/1/84
#9 RWQCB letter 11/28/84
#10 " " 2/22/85

E. Current Status (as of 3/28/85)

Ongoing Phase II.

F. References

1. "Litronix - Phase II Subsurface Investigation" by Woodward-Clyde Consultants 8/83
2. "Litronix - Phase III Subsurface Investigation" by WCC 12/83
3. "A Preliminary Evaluation of an Experimental Program to Remove Volatile Organics from Unsaturated Soils by Vacuum Extraction" by WCC 2/84
4. "Estimate of Organic Contaminants Present in Area One Soils" by WCC 2/84

INPRINT CORPORATION
968 Stewart Drive
Sunnyvale, CA 94086

Site #: OG 46
File Name: Inprint

Reviewed 4/17/85

Reviewer: MCT

A. Description of Site

No information on operations, length of occupancy, prior occupants or use in file.

No facilities questionnaire in file (submitted 10/12/83 by InPrint, according to CAO).

1 - 1,000 gal. subsurface storage tank on site, excavated 7/84.

No information on chemicals used on site in file.

Attachments: #1 Site Maps

B. Geology

One boring to 25 ft. - profile as follows:

0 - 7 ft.	Silty Clay
7 - 11 ft.	Sandy Clay to Clayey Fine Sand
11 - 19 ft.	Interbedded Silty Clay and Clayey Fine to Medium Sand
19 - 25 ft.	Silty Clay
(BOH)	

Soil classification per Risk Assessment Question #11.

Attachments: #2 Boring Log

Hydrogeology

One monitoring well (MW) (slotted interval 13-23 ft.) so little hydrogeologic information. Shallowest groundwater (GW) encountered at 14.5 ft (1).

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

Soil contamination - 5 chemicals. Major contaminants:

Tetrachloroethylene	120 ppb
Methylene Chloride	31 ppb

GW contamination - 6 chemicals. Major contaminants:

1,1,1-Trichloroethane	53 ppb
Tetrachloroethylene	45 ppb

No information on possible sources of contamination in file.

Attachments: #3 Lab Results

D. Case Chronology

See Attachment #4 for more detailed case chronology (7/84-11/84).

Leak Detection Program 1983.

10/13/83	Facilities Questionnaire submitted.
11/3/83	RWQCB letter requires subsurface investigation (subsequent letters 11/14, 12/9, and 12/22 reiterate this request).
3/8/84	Phase I proposal by InPrint submitted.
4/11/84	RWQCB conditionally approves Phase I proposal, requires investigation to begin by 4/25/84.
7/3/84	CAO #84-005 issued because of delays in initiating investigation (Attachment #5).
7/27/84	Storage tank excavated and soil samples taken.
11/14/84	RWQCB requires installation of MW.
11/26/84	LF memo with status of CAO compliance.
11/26/84	Proposal for MW received.
11/27/84	LF gives verbal approval of monitoring program (in writing 12/6/84).
2/5/85	GW monitoring results by Emcon submitted. Findings: GW contamination detected.
3/6/85	RWQCB letter with requires further investigation (Attachment #6).
3/29/85	RWQCB letter approves modifications of previous requirements for further investigation (Attachment #7).

Attachments:
#4 Case Chronology (7/3/84-11/5/84)
#5 CAO #84-005 issued 7/3/84
#6 RWQCB letter 3/6/85
#7 " " 3/29/85

E. Current Status (as of 4/17/85)

Phase II.

F. References

1. Phase I report by Emcon Associates 2/85.

DATA GENERAL CORP.
433 North Mathilda
Sunnyvale, CA

Site #: OG 47
File Name: Gendata

Facility: 1 building

Date Reviewed: 8/21/84

Reviewer: MCT

A. Description of Site

- Data General is engaged in the manufacture of various high technology products.
- No information on lenght of occupancy, previous occupants or uses.
- 1 - 3,000 gal. vaulted underground tank for nonpotable water installed 1973 - flow of 28,000 gpd.
- 1 - 1,400 gal vaulted underground storage tank for solvents (Acetone, Isopropyl Alcohol, Xylene, and N-Butyl Acetate among others) installed 8/78.
- 1 Acid Neutralization System consisting of 1 vaulted tank and 1 concrete sump (180 gpm peak design) installed 8/78 - average flow 110,000 pgd.
- Old solvent tank (1500 gal) was not removed but drained and filled with concrete. Used from 1972-78.
- Old acid neutralization system now used for holding and drainage of nonpotable water. Used for acids 1973-78.

Attachments: #1 - Site Location Maps (2 pages)
#2 - Facilities Questionnaire

B. Geology

Sediments in Project Area (Xidex, Verbatim, Data General, Zymos) characterized by overlapping lenses of clay, silt, and gravel. Lenses vary in thickness from 0.5 to greater than 5 ft. (Converse Consultants, 3/83)

1 boring to depth of 41.5 ft at Data General site.

Soil Classification per Risk Assessment question #11.

Attachments: #3 - Soil Borings and Key (2 pages)

Hydrogeology

1 Monitoring well (MW) (GD-1A) located adjacent to neutralization sumps and abandoned solvent tank as shown on attachment #3.

- 1 aquifer defined for Project Area; water bearing layers approx. 12-24 ft, increasing downgradient.
- Shallowest groundwater (GW) at Data General = 17.75 ft.
- GW flow direction in Project Area is N-NE, from Xidex to Zymos.
- GW gradient is very flat - .0035 to .007 ft/ft with less than 1 ft vertical fluctuation reported in GW elevations.

Conductivity varies between 1000 g/d/ft2 for water bearing sand and gravel, and .001 g/d/ft2 for interlayered clays and silt. Vertical GW flow is restricted by clay and silt layers resulting in perched GW tables (Converse Consultants, 3/83 - see Attachment #6).

Attachments: #4 - Monitoring Well Location Map
#5 - Hydrogeologic Data (2 pages)
#6 - Conductivity Data

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on sote: Of chemicals detected, Facilities Questionnaire mentions only Xylene as being stored in underground solvent tank.

Soil contamination - 6 chemicals. Major contaminants:

TCE	19 ppb
Freon	13 ppb

GW contamination - 8 chemicals. Major contaminants:

TCE	260 ppb
Xylene	72 ppb
Chloroform	31 ppb

Source of GW contamination unknown; Data General is downgradient of Xidex and Verbatim, upgradient of Zymos. Data General GW contamination similar but less severe than that of Zymos; major contaminants of Xidex & Verbatim are at less than detection limits tested at Data General (Detection limit 10 ppm for 2-Methoxyethanol and 1-Methoxy-2-Propanol, 50 ppb for Methylene Chloride).

RWQCB plume maps for Data General's 3 major contaminants show local cluster for TCE around Data General and Zymos, while contamination upgradient for Xylene and Chloroform was less than that found at Data General (1 ppb Chloroform and 49 ppb Xylene at Xidex) and, downgradient, undetected for Zymos.

Attachments: #7 - Soil and GW analysis, 1/83
#8 - Soil and GW analysis, 2/84
#9 - RWQCB Plume Maps for TCE, Xylene, and Chloroform (3 pages)

D. Case Chronology

Leak Detection Program 1982
Facilities Questionnaire received 5/28/82
Phase I subsurface investigation by Dames & Moore received 2/17/83. Findings: Soil and GW contamination (see Attachment #7). Source and extent inconclusive; directed by RWQCB to work as Project Area (with Xidex, Verbatim, and Zymos) to define contamination.

Phase II plume identification by Leland D. Attaway & Associates completed 4/84. Findings: Hydrogeologic data defined for Project Area (see Attachment #5). Source of contamination at Data General not identified; none of 5 major chemicals detected at each company was found at all four companies. Contaminants cluster around Xidex and Verbatim, and Data General and Zymos. Plume maps not drawn for Project Area report. RWQCB plume maps not well defined since detection limits not very sensitive (25-50 ppb).

E. Current Status (as of 6/14/84)

Plan by RWQCB to follow up on TCE monitoring (JYL).

F. References

1. Dames & Moore 2/83
2. Leland D. Attaway & Associates 4/84
3. Converse Consultants for Xidex 3/83
4. Dames & Moore for Zymos 2/83
5. Emcon Associates for Verbatim 12/82

Pierce & Stevens Chemical Corporation Site #: OG 48
805 Sinclair Frontage RD, Milpitas 95035 File Name: P&SCC

Facility: 3 Bldgs
Date Reviewed: 7/84;3/85 Reviewer: LK

A. Description of Site

No information re: length of occupancy, operations on site, previous use of site.

10 non-vaulted underground solvent storage tanks,
2 = 9950 gal, 8 = 6000 gal; located at West end of facility, installed 1972; tank bottom 10 ft below grade.

Chemicals on site: Toluene, MEK, Acetone, Hexane, Naphtha, Ethyl Acetate, Solvent blend (Ketones and Aromatics - not specified), Isopropyl alcohol (IPA), Isopropyl acetate, Tolusol-10.
Used on site but not in buried tanks: Methylene Chloride, TCA.

Upgradient facility = Great Western Chemical Company.

Attachments: #1 - Site Location Map
#2 - Facility Map, 2 pgs
#3 - Facility Questionnaire, 8 pgs
#4 - Additional Chemicals Used On-Site

B. Geology

Facility underlain by heterogeneous deposits of clay, sand and gravel. The saturated zone consists of thin sandy layers or lenses of clay.

Borings 1/83 by International Engineering Company, Inc (IECO).
Additional borings 7/83 by EMCON.

Soil Classification per Risk Assessment Question # 11.

Attachments: #5 - Boring Logs by IECO, 16 pgs
#6 - Boring Logs by EMCON, 4 pgs

Hydrogeology

Shallow aquifer defined; 6 monitoring wells to depth 34-39 ft.
Shallowest GW = 11 ft (OW-1). Standing GW level = 14-14.5 ft.
GW flow direction = NW.
Gradient = .0038 ft/ft
Not given in report; Calculated from EMCON report using Great Western Chemical Co well #1 to P&SCC well OW-2:
elvation = 38.30/37.38 ft distance = 258.75 ft
See Plume Maps Attachment # 10.

Attachment: #7 - Hydrogeologic Information, 2 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions 1,2,3,4.

Total chemicals detected in soil = 8 GW = > 10

1/83 Samples poorly analyzed by Foremost-McKesson (ppm), showed Acetone and/or IPA in GW, Toluene in 1 GW and all 5 soil samples taken at 15 ft depth.
IECO report concludes "one or more storage tank may be leaking."

3/83 Repeated GW samples = major contamination for on-site chemicals at OW-2 (ppb):
IPA 73,000 Acetone 34,000 MEK 4,000 1,1,1-TCA 1100
Methylene Chloride 870 Toluene 550
Tolusol-10 88 Hexane 19

Data for OW-5 not located.
"Solvent blend" on site not specified; many Volatile Organic Compounds detected in GW.

Neighboring company Great Western Chemical Co. upgradient; 8 chemicals detected there in soil and GW.
Both companies report use of MEK, Acetone, Toluene.

7/83 EMCON joint investigation GWCC and P&SCC with monitoring well E-1 midway between both. Repeated soil and GW samples at P&SCC =
GW: TCA, TCE, PCE, and Toluene major contaminants; highest at E-1, decreasing along NW flow direction
soil: still high concentrations of Benzenes, Xylene, Toluene at E-2 4,8,12 ft

EMCON report does not include plume maps for contaminants between companies.

Attachments:
#8 - IECO GW/Soil Data, Leak Note 2/83, 3 pgs
#9 - Repeated GW Sampling 3/83, 4 pgs
#10 - RWQCB Plume Maps 1,1,1-TCA and TCE for P&SCC and GWCC
#11 - EMCON GW/Soil Data 7/83, 7 pgs
#12 - GWCC Chemicals on Site

D. Case Chronology

5/4/82 Facility Questionnaire completed for Leak Detection Program.
2/83 Phase I Subsurface Investigation by IECO
Findings - soil and GW contamination
conclude 1 or more storage tank may be leaking (Attachment #8, pg 3).
33/28/83 Resampled GW results showed major contamination at OW-2 with on-site chemicals.

8/10/83 Phase II Plume Identification by EMCON

Findings - 2 distinct chemical patterns at P&SCC
soil from storage tank area contained significant concentrations of aromatic organic compounds with general absence of chlorinated compounds;
GW had high levels of chlorinated compounds with general lack of aromatics (Attachment #11, pg7).

E. Current Status

9/83 RWQCB notes pattern of soil/GW contamination between P&SCC and GWCC as above.

12/84 Facility investigation OnGoing but awaiting Great Western Chem Co resampling before further specifications.

Attachment: #13 - RWQCB Memo re: Facility Phase II Report, 2 pg
#14 - RWQCB, DOHS Correspondence re: Status, 4 pg

F. References

1. IECO Report 2/83
2. EMCON Report 8/83
3. Facility Questionnaire (Attachment #3)

Synertek, Inc.
3050 Coronado Dr (Bldg 1) Site #: OG 49
3001 Stender Way (Bldg 3) OG 50
Santa Clara, Ca 95054 File Name:Syner

Facility: 6 Bldgs
Date Reviewed: 12/84 Reviewer:LAP/LK

A. Description of Site

No info re: previous use of site, length of occupancy, operations on site.
Facility map identifies 6 bldgs and history of use:
#1 = Fab I; #2 = support services; #3 = headquarters, Fab III, memory, sales/marketing; #4 = test/sort; #5 = custom/logic, R & D, shipping/receiveing, purchasing, quality/reliability; #6 = microprocessors, human resources, systems, finance.

Underground tanks located at Bldgs 1 and 3.
Bldg 1 (west side):
800 gal non-vaulted tank, installed 1974, abandoned 1982.
Chemicals used: Xylene, N-Butyl acetate, Burmar 712-D, Methyl alcohol, Isopropyl alcohol (IPA), Freon, Trichloroethylene (TCE), TCA, Hexamethyldisilizane (HMDS), and Ethylene glucol monoethyl ether acetate (EGMEA).

200 gal non-vaulted tank, installed 1976.
Chemicals stored: TCE, TCA.

Bldg 3 (east side):
550 gal non-vaulted solvent waste tank, installed 1978.
Chemicals: Acetone, IPA, Methyl alcohol, HMDS, TCE, TCA, Freon TF, Burmar 712-D, Xylene, N-Butyl acetate, Methyl Cellosolve acetate.

800 gal non-vaulted tank installed 1978, abandoned ~1982.

Attachments:	#1 - Site Location Map	
	#2 - Facility Maps	3 pgs
	#3 - Facility Questionnaires	17 pgs
	#4 - Chemicals On Site	2 pgs

B. Geology

Sediments consist of interfingering, discontinuous lenses.
Conditions varied distinctly between Bldg 1 and 3.
Geology near Bldg 1 contains sand and gravel lenses near monitoring well 4S; a lean clay layer 6 ft deep is found under Bldg 1 at 25 ft depth.
Bldg 3 contains sands and silts.

Soil classification per Risk Assessment Question # 11.

Attachments: #5 - Boring Logs 25 pgs
#6 - Soil Information 2 pgs

Hydrogeology

9 GW monitoring wells (MW).
2 aquifers sampled:
"A" aquifer identified as "S", "B" aquifer identified as "D".
Shallowest GW = 6.9 ft at 4D, 9/22/83.
GW flow direction initially showed N-NW; 9/83 data shows direction N-NE for shallow GW.
GW gradient = .004 ft/ft near Bldg 1.
Transmissivity = 325 gpd/ft, Bldg 3; Bldg 1 may be lower
Permeability = 65 gpd/sq ft
Velocity = 65 ft/yr in shallow sands

Data suggest a leaky aquifer system exists.

Facility located between San Tomas Aquino Channel and Saratoga Creek.

Attachments: #7 - Hydrogeology Information 7 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected: GW = >10 soil = >10

Major contaminant Bldg 1 = TCE (ppb): GW - 2300 soil - 850
Bldg 3 = Acetone " GW - 1600 soil - 3700
Both chemicals stored on site.

Major contamination per aquifer (ppb):

A =	TCE	2300 at 4S	B =	1,1-DCA	28 at 4D
	Xylene	1610 at 6S		1,1,1-TCA	23 at 6D
	Acetone	1600 at 6S		TCE	13 at 4D
	TCA	1400 at 4S			
	Freon	1300 at 2s			

RWQCB memo notes neutralization sump history of leaks.

Soil contamination found at 20 ft depth Bldg 1 (TCE 850 ppb); 45 ft depth Bldg 3 (Acetone 1600 ppb).

Attachments: #8 - GW Data 2/83, 9/83 10 pgs
#9 - RWQCB GW Plume Maps 3 pgs
#10 - RWQCB Memo re: Sump Leak
#11 - Soil Data 2/83, 9/83; Contamination Maps 11 pg

D. Case Chronology

10/82	Facility Questionnaire completed
2/22/83	Phase I Subsurface investigation by Engineering-Science Findings - soil and GW contamination 6 MWs on site
9/83	5 additional MWs installed, 2 in "B" aquifer
1/84	Phase II report by ES Findings - inadequate description of source and extent of contamination
3/84	RWQCB required further identification of plume/source Facility considering sale of Bldg 1
7/84	Phase III proposal submitted; not accepted
8/84	Revised Phase III proposal submitted
10/84	Issuance of CAO considered
11/84	Facility to install 2 new wells, resample all wells

E. Current Status

11/84 Facility to install 2 new wells, resample all wells.

Attachment: #12 - RWQCB/Facility Correspondence 4 pgs

F. References

1. ES Report 2/83, 2 pgs
2. ES Report 9/83
3. Phase III proposals, 2 pgs
4. RWQCB correspondence 2 pgs

TECHNICAL COATINGS CO.	Site #: OG 51
1000 Walsh Avenue	File Name: B:TC
Santa Clara, CA 95050	

Date Reviewed: 9/26/84 Reviewer: MCT

Facilities: 4 buildings

A. Description of Site

Technical Coatings is a subsidiary of Benjamin Moore & Co. - manufacturers of paints. No information on length of occupancy or previous occupants in file.

Site contains:
- 13 - 4,000 gal. non-vaulted tanks
- 1 - 300 gal. diesel tank
- 1 - 1,500 gal. clarifier sump

Chemicals stored in underground tanks:

Cellosolve Acetate	MEK
Toluene	MIBK
Xylene	Alkyd Resin
Diesel Fuel	Bodied Fish Oil
Aliphatic Solvent (Chevron 1)	Waste Solvent

Petroleum Naptha (Chevron 250, Chevron 350H, and Super VM & P)

Attachments: #1 Site Location Map
#2 Facilities Questionnaire

B. Geology

Soil profile predominantly sandy clayey silt (USCS designated "CL" soil).

14 Borings; deepest 31 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs

Hydrogeology

Only one aquifer layer defined. Shallowest groundwater (GW) at ~7 ft. (1). Regional GW flow is to the northeast but site GW flow is directly to the north - Cooper & Clark (2) attribute this discrepancy to clean-up operations at Monsanto, located directly north of the Technical Coatings site, which could be inducing an artificial gradient across the Technical Coatings site. GW gradient 0.006 ft/ft; calculated seepage velocity ~0.09 ft/day (2).

13 Monitoring Wells (MW); deepest 20 ft.

Attachments: #4 Hydrogeologic data
#5 GW elevation map

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: The phase I study detected nearly all chemicals stored on site but RMB determined that quantification of contamination was invalid because of improper sampling and analytical techniques. Phase II data detected only Xylene & Toluene in GW and soil - more chemicals could be in GW & soil but I am unfamiliar with the constituents of many of the products stored on site (Petroleum Naptha, Chevron 1, etc.).

Soil contamination - 5 chemicals. Major contaminants:

Xylene	210 ppm
Ethylbenzene	120 ppm

GW contamination - 10+ chemicals. Major contaminants:

Toluene	400 ppm
Xylene	150 ppm

NOTE: Phase I results not used in assessment of contamination.

See Attachment #8 for list of chemicals detected that were never used on site (2).

No clean wells were found on site. Therefore plumes cannot be drawn (see Attachment #9 for distribution maps of major contaminants). No mention of possible sources in file.

CAO issued 4/27/77 (Order #77-005) for spillage, improper handling of chemicals and solvents, improper storage facilities, and improper waste disposal practices - very little followup information in file.

Downgradient (DG) facilities: Monsanto, Owens-Corning, PMI, Fairchild.
Upgradient (UG) facilities: Pacific Nursery Pots, Memorex
Nearest DG facility Monsanto - common contaminants Xylene, Toluene, and Ethylbenzene.

Attachments: #6 Phase I Lab Results 1/25/83
#7 Phase II Lab Results Summary* 6/13/84
#8 Chemicals detected but never used on site
#9 RWQCB contamination distribution maps

*On page 2 of Attachment #7 additional lab results on contaminant summary are written in pencil and attached on the following pages. See Phase IIA report, Appendix A for complete lab results.

D. Case Chronology

Leak Detection Program 1982

4/27/77	CAO #77-005 issued.
7/5/78	RWQCB memo discusses Technical Coatings compliance with CAO (Attachment #10) - no additional followup information in file.
5/26/82	Facilities Questionnaire completed.
3/9/83	Phase I subsurface investigation by Cooper & Clark Consulting Engineers received by RWQCB. 11 Borings, 10 MWs constructed. Findings: GW contamination, soil contamination below limits of detection.
2/10/84	Phase II proposal from Cooper & Clark completed.
7/13/84	Phase II subsurface investigation by Cooper & Clark recieved by RWQCB. 3 Borings, 3 MWs constructed. Findings: Widespread GW and soil contamination, additional hydrogeologic data determined.
9/6/84	Proposal for additional Phase II studies received by RWQCB.
9/26/84	RWQCB approves proposal for additional studies.

Attachments: #10 RWQCB memo 8/17/78
#11 RWQCB letter 9/26/84

E. Current Status (as of 9/26/84)

Waiting for additional Phase II studies.

F. References

1. Cooper & Clark Phase I study 3/83
2. Cooper & Clark Phase IIA study 7/84
   Misc. Correspondence

American Microsystems, Inc
3800 Homestead Rd, Santa Clara 95051

Site #: OG 53
File Name: AMI

Facility: 6 Bldgs
Date Reviewed: 6/84;3/85

Reviewer:LAP/LK

A. Description of Site

No info re: length of occupancy, previous use of site; landowners are from agricultural families.
Operations on site = developing, manufacturing, and selling custom and standard semiconductors.

1 250 gal underground non-vaulted non-waste storage tank; installed 1974, discontinued 1975; S of Bldg 300.
1 6000 gal underground active neutralization sump; installed 1970; 150,000 gpd; S of Bldg 300.
1 2000 gal underground inactive sump; installed 1960-67 (?), discontinued 1970; E of Bldg 100.

Chemicals on site: not specified; various acids, solvents, bases. RWQCB file records 1980-81 note the following chemicals stored: Phenol liquid, Freon TF, Isopropanol, Methanol, Acetone, Xylene, Photoresist, N-butyl acetate, 1,1,1-TCA.

Facility located midway on Homestead between Lawrence Expressway and Tantau, adjacent to Calabazas Creek.
Siemens, Hewlett Packard located W of AMI; Fourphase located SW.

Attachments: #1 - RWQCB Site Location Map
#2 - Facility Map 2 pgs
#3 - Facility Questionnaire/UIC Program 12 pgs
#4 - Chemicals OnSite 2 pgs

B. Geology

Sediments on site are silty and sandy clay with gravel and fine sand lenses.
Deepest boring = E-2 to 105.5 ft

Soil classification per Risk Assessment Question # 11.

Attachment: #5 - Boring Logs 2 pgs

Hydrogeology

2 Monitoring Wells.
Shallowest GW = 84 ft, E-1 5/17/85
GW flow direction for area assumed = N.
GW gradient not determined.

City of Santa Clara has a producing municipal well ~750 ft SE of main manufacturing bldg (? bldg 300). Well shows no water flow above the 250 ft depth. Well tested and found free of contamination at 1 ppb.

Attachment: #6 - Hydrogeology Information 2 pgs

C. Contamination

See Risk Assessment Chemical Properties Question # 1,2,3,4.

Total chemicals detected: GW = 6 soil = 10

6/14/85 EMCON Draft data shows highest detection at E-1 (ppb):

1,1,1-TCA	1500
1,1-DCA	180
1,1-DCE	90
TCE	70

Soil contamination at Bldg 100 - site of inactive sump:
Ethylbenzene 5 ppb at 12-12.5 ft

Soil contamination at Bldg 300 - site of underground tank and active neutralization sump: (ppb)

Bis(2-ethylhexyl)phthalate (DEHP)	1200	in Backfill
Ethylbenzene	820	"
	355	at 8.5 ft soil
Benzo (k) fluoranthene	480	in Backfill
Phenanthrene	400	"
Chrysene	400	"
Di-n-butylphthalate (DBP)	190	"

1,1,1-TCA and Benzene detected in increasing concentration with increasing soil depth.
Toluene detected in decreasing concentration with increasing soil depth.

Resampling 5/83 at Bldg 300 detected TCE 300 ppb and Freon 310 ppb at 15 ft, neither previously detected.

EMCON facility map with location of borings not given.

Underground tank excavated 9/82; plumbing was corroded and oily material had leaked into gravel around tank.
20 cu yds of soil also removed.

Attachments: #7 - RWQCB Contamination Map
#8 - Soil Data 5 pgs
#9 - Leaky Tank/Soil Information 6 pgs
9B - EMCON Draft Data 6/14/85

D. Case Chronology

6/82 Facility Questionnaire completed
9/82 Alternative to Phase I subsurface investigation done
AMI removed underground tank, sampled soil
Findings - soil contamination
9/82 Tank excavation detected leaky plumbing
3/83 Tank and contaminated soil removal completed
5/83 Soil resampled
Findings - 2 contaminants
2/85 RWQCB requested GW investigation, installation of 1 monitoring well
3/85 AMI to submit proposal for GW investigation by mid-April
6/85 EMCON Draft Data
Findings - GW and soil contamination

E. Current Status

2/85 Neighboring facilities Siemens and Hewlett Packard detected elevated concentration of organic solvents in perched and/or shallow GW beneath those sites.
RWQCB requested AMI to initiate GW investigation.
3/85 AMI awaiting results from Siemens GW sampling; to submit proposal by mid-April.
6/85 On Going case

Attachments: #10 - RWQCB/AMI Correspondence re:Status 6 pgs

F. References

1. EMCON report 9/27/82 2 pgs
2. EMCON report 6/6/83 2 pgs
3. Correspondence (as above)
4. RA Summary review by facility representative
5. EMCON Draft Data 6/14/85

INTERSIL, INC.
1276 Hammerwood Ave.
Sunnyvale, CA

Site #: OG 54
File Name: Intersil

Date Reviewed: 9/19/84

Reviewer: MCT

Facility: 1 Building

A. Description of Site

No information on operations, length of occupancy, prior occupants or use in file.

Site has one vaulted 1600 gal. muliple compartment treatment tank with a daily flow through volume of 120,000 gal. Waste water contains low concentrations of Freon, Isopropyl Alcohol, N-butyl Acetate, Xylene, Chlorobenzene, and 1,1,1-TCA (Attachment #3).

TCE was used on site up to 12/80; Freon currently used in solvent degreaser to clean electronic parts (Attachment #7).

Attachments: #1 Site Location Map
#2 Site Maps
#3 Facilities Questionnaire

B. Geology

Site underlain by mostly silty clays.

1 Boring 31 ft. deep, located ~26 ft. north of sump (see Attachment #2 for location).

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Logs

Hydrogeology

One Monitoring Well (MW) installed 3 ft. east of boring to a depth of ~21 ft.

Only one aquifer layer defined - no information on depth range in file. Shallowest groundwater (GW) 4'7" - no data on GW gradient or direction of flow.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: TCE, Freon detected in GW (see Attachment #7)

Soil contamination - no chemicals detected but detection limits relatively high (from 25 ppb for chlorobenzene to 100 ppb for Freon). Undisturbed soil sample taken at 8 ft.

GW contamination - 7 chemicals. Major contaminants:

trans-1,2-DCE	1,000 ppb
Freon	600 ppb
TCE	250 ppb

GW sampled at 7 ft.

Chemical testing was limited for organics. 2 chemical analyses performed: Anatec (1/83 - Soil & GW) and Acurex (3/83 - GW only).

Dysan located east of Intersil - no overlap between chemicals found.

Attachments: #5 Lab Results 1/18/83
#6 Lab Results 3/3/83
#7 Intersil letter 3/21/83

D. Case Chronology

Leak Detection Program 1982

5/28/82	Facilities Questionnaire received by RWQCB.
2/28/83	Phase I subsurface investigation by Cooper Engineers completed. Findings: GW contamination detected; no soil contamination detected but soils not tested for most chemicals found in GW.
5/1/84	SCH recommends proposal for Phase II study be required.

Current Status (as of 9/19/84)

At Phase I - SCH recommendations as of 5/1/84:

1. Require proposal for Phase II study
2. Test for materials in soils that have been found in GW
3. Soil and water samples should be analyzed for all chemicals found or used at this facility.

References

Cooper & Clark Phase I report 2/83

XIDEX
305 Soquel Way
Sunnyvale, CA

Site #: OG 55
File Name: Xidex

Facility: 2 buildings - 307 Soquel Way
307 North Pastoria Ave

Date Reviewed: 8/21/84
Reviewer: MCT

A. Description of Site

Xidex manufactures duplicating microfilm and other related items. It has occupied this site for 15 years (Underground Injection Control program questionnaire, 1980).

No information found on previous occupants or uses.

2 underground tank farms located on site used to store various compounds used in production. These farms consist of 8 nonvaulted tanks (3 @ 7,500 gal., 1 @ 10,000 gal., 3 @ 12,000 gal., and 1 @ 8,000 gal. capacity). 4 are located at 305 Soquel Way; the other four as well as one 8,000 gal. nonvaulted waste solvent tank are located at 307 North Pastoria Ave (see Attachment #1, p.2). For a more detailed description of the site, see Attachment #1, p. 3.

See Attachment #2 for listing of chemicals stored onsite.

Attachments:
#1 - Site Location Maps (3 pages)
#2 - List of Chemicals Stored Onsite
#3 - Facilities Questionnaire

B. Geology

The sediments in the Project Area (Xidex, Verbatim, Data General, and Zymos) are characterized by overlapping lenses of clay, silt, and gravel. Lenses vary in thickness from 0.5 to greater than 5 feet. (Converse Consultants, 3/83)

4 Borings; deepest boring 42 feet (see Attachment #1 for locations)

Soil classification per Risk Assessment Question #11.

Attachments:
#4 - Boring Logs and Key (5 pages)
#5 - Soil Profiles (2 pages) (see Attachment #1 for location of cross-sections)

Hydrogeology

4 Monitoring Wells; 2 located North (downgradient) of the underground tank farms, 2 located upgradient of farms (see Attachment #1)

1 Aquifer defined for project area. Two estimates of saturated zone depth range: 12-24 ft., increasing downgradient (Attaway, 4/84) and 20-40 ft (Converse, 3/83).

Shallowest groundwater (GW) encountered = 22.79 ft.

GW flow direction in Project Area is N-NE (i.e. from Xidex to Zymos).

GW gradient is very flat - .0035 to .007 ft/ft with less than 1 ft vertical fluctuation reported in GW elevations (Attaway, 4/84 - see Attachment #6).

Conductivity varies between 1,000 g/d/ft2 for water bearing sand and gravels, and .001 g/d/ft2 for interlayered clays and silt. Vertical GW flow is restricted by clay and silt layers resulting in perched GW tables (Converse,3/83 - see Attachment #7).

Attachments: #6 - GW depth and flow data
#7 - Aquifer depth and conductivity data

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: 2-Methoxyethanol, 1-Methoxy-2-Propanol, and Methylene Chloride were detected in GW; only Methylene Chloride was detected in soil (see Attachment #8).

Soil Contamination - 9 chemicals. Major contaminants:

2,2'-Oxybisethanol	120-143 ppm
Phthalate	33-58 ppm

GW Contamination - 14 chemicals. Major contaminants:

2-Methoxyethanol	~500,000 ppm
1-Methoxy-2-Propanol	~10,000 ppm

Source of contamination seems to be onsite for major contaminants from interpretation of RWQCB plume maps (Attachment #12). Contamination seems to have migrated downgradient to Verbatim - it is unclear whether contamination has spread further downgradient due to relatively large detection limits for DG wells (10 ppm for major contaminants).

Upgradient (UG) wells are uncontaminated except for Caprolactam (60 ppb in well OW-3) and 2-Methoxyethanol (140 ppm in well OW-2, 25 ppm in well OW-3).

2 Additional wells suggested in Attaway Project Area study showed no contamination (verbal communication with JYL). Adjacent Signetics Corp. well showed no contamination (see Attachment #13).

Attachments: #8 - Converse Consultants chemical results summary
#9 - Attaway chemical results summary
#10 - GW analysis, 2/83 (7 pages)
#11 - GW analysis, 2/84 (6 pages)
#12 - RWQCB Plume Maps (5 pages)

#13 - Signetics Corp. data (4 pages)

D. Case Chronology

Leak Detection Program 1982

Facilities Questionnaire received 6/1/82 (Attachment #3)

Phase I subsurface investigation by Converse Consultants completed 3/83. Findings: Soil and GW contamination (see Attachment #8). Source and extent inconclusive; directed by RWQCB to work as Project Area (with Verbatim, Data General, and Zymos) to define contamination.

Phase II plume identification by Leland D. Attaway and Associates comleted 4/84. Findings: Hydrogeologic data defined for Project Area (see Attachment #6). Consultants made no conclusions concerning the sources of contamination. Plume maps were not drawn for Project Area report. None of the 5 major chemicals detected at each company was found at all four companies; contaminants cluster around Xidex and Verbatim, and Data General and Zymos.

E. Current Status (as of 6/14/84)

Xidex will go offsite to determine lateral extent of plume and will institute clean-up program for methylene chloride and other chemicals.

F. References

1. Converse Consultants 3/83
2. Leland D. Attaway & Associates 4/84
3. Underground Injection Control questionnaire, 1980
4. Emcon Associates report for Signetics Corp. 5/82

ZYMOS CORPORATION
477 N. Mathilda Ave, Sunnyvale 94086

Site #: OG 56
File Name:Zymos2

Facility: 1 bldg
Date Reviewed: 8/8/84

Reviewer: LK

A. Description of Site

Zymos facility is 3 yrs old; no other information re: previous occupancy, use of site.

Company manufactures silicon wafers, magnetic storage media and related items.

1 1000 gal underground non-vaulted solvent storage tank; installed 1980.

1 above ground pretreatment neutralization system, 25000 gpd; installed 1980.

Chemicals on site: Xylene, N-butyl acetate, Photoresist, Acetone, Isopropyl alcohol; acids for treatment unit not specified. Photoresist composition not specified.

Attachments: #1 - Site Location Map
#2 - Facility Questionnaire

B. Geology

Sediments in Project Area (Xidex, Verbatim, Data General, Zymos) characterized by overlapping lenses of clay, silt, and gravel. Lenses vary in thickness from 0.5 to >5 ft. (Information from Converse Consultants report, Ref.# 3)

1 boring to depth of 40 ft on Zymos site.

Soil classification per Risk Assessment Question # 11.

Attachment: #3 - Boring Log and Key, 2 pgs

Hydrogeology

1 Monitoring Well on Zymos site (YZ-1A) located South of bldg and West of underground storage tank.

1 aquifer defined for Project Area; water bearing layers approx. 12-24 ft, increasing downgradient.

Shallowest groundwater (GW) at Zymos = 17.09 ft.

GW flow direction in Project Area is N-NE, from Xidex to Zymos.

GW gradient is very flat = .0035 to .007 ft/ft with <1 ft vertical fluctuation reported in GW elevations.

Conductivity varies between 1000 g/d/sq ft for water bearing sand and gravel, and .001 g/d/sq ft for interlayered clays and silt. Vertical GW flow is restricted by clay and silt layers resulting in perched GW tables. (Information per Converse Consultants)

Attachments: #4 - Monitoring Well Site
#5 - Hydrogeology Data, 2 pgs

C. Contamination

See Risk Assessment Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: Xylene detected in soil but not GW; other chemicals not detected; composition of Photoresist not specified.

Soil contamination = 2 chemicals:

Trichlorethylene	2 ppb	15.8,20.8 ft	(not used on site)
Xylene	1 ppb	"	

GW contamination = 8 chemicals; major contaminants =

Trans-1,2-Dichloroethylene	920 ppb
Trichloroethylene	320 ppb

Source of GW contamination unknown; Zymos downgradient of Project Area; Data General GW contamination similar but lesser quantities than Zymos detection; Major contaminants of Xidex and Verbatim less than detection limit at Zymos (2-Methoxyethanol, 1-Methoxy-2-Propanol, Methylene Chloride).

RWQCB Plume maps for Zymos 2 major GW contaminants show local cluster for TCE around Data General and Zymos, and isolated cluster for Trans-1,2-Dichloroethylene.

Attachments: #6 - Soil and GW Analysis for Zymos 1/83
#7 - GW Analysis for Zymos 2/84, 2 pgs
#8 - Soil/GW Analysis for Data General and Chemicals on site, 3 pgs
#9 - RWQCB Plume Maps for Trans-1,2-Dichloroethylene and Trichloroethylene, 2 pgs

D. Case Chronology

Leak Detection Program 1982.

Facility Questionnaire completed 5/20/82. (Attachment 2)

Phase I Subsurface Investigation by Dames & Moore 2/2/83;
  Findings: soil and GW contamination (Attachment 6)
  Source and extent inconclusive; directed by RWQCB to work as Project Area to define contamination.

Phase II Plume Identification for Project area by Leland D. Attaway & Asso 4/84;
  Findings: hydrogeological data defined for Project Area, GW analysis only (Attachment #5).
  Source of contamination at Zymos not identified; None of 5 major chemicals detected at each company was found at all 4 companies; Contaminants cluster around Xidex and Verbatim, and Data General and Zymos.
  Plume maps not drawn by LDA&A for Project area.
  RWQCB Plume maps not well defined since detection limit not very sensitive (<25, <50 ppb).

E. Current Status

6/84 No further follow-up with Zymos by RWQCB at this time.
RWQCB to continue follow-up with other 3 companies.

References

1. Dames & Moore 2/83
2. Leland D. Attaway & Asso 4/84
3. Converse Consultants for Xidex 3/83

TRW Microwave Inc. Site #: OG 57
825 Stewart Dr, Sunnyvale 94086 File Name: TRW825

Facility: 3 bldgs
Date Reviewed: 6-26-84 Reviewer: LK

A. Description of Site

Use of facility began 1968; had 3 stage neutralization system installed prior to occupancy; operations on site, previous use of site not specified.

TRW included in area-wide investigation with AMD and Signetics.

Underground tanks N of bldg 1:

1 750 gal vaulted solvent storage tank, installed 1980; used for two years to store spent solvents; empty 1982; removed 1983

1 750 gal DI Neutralization tank, installed 1970; replaced to above ground system 8/84.

Chemicals stored on site (From 1970-1981 stored in portable metal sheds outside N wall bldg 1):
Trichloroethylene (TCE), Acetone, Xylene, Isopropyl alcohol (IPA), Methyl alchohol; Chromic, Hydrofluoric, Hydrochloric, Nitric and Sulfuric acids.

TRW stopped using TCE in 1983.

Attachments: #1 - Site Location Map
#2 - Facility Map
#3 - Facility Questionnaire/Information 9 pgs

B. Geology

Soils in vacinity of solvent tank are fine-grained sediments consisting of silty clays and sandy silts.
Geologic Cross-Section for site described by Engineering Science for AMD and consists of sand and gravel layers, and clays

Well OW-1 destroyed 7/84. Additional wells 7,8,9, and 2C added in 11/84 report.

Soil Classification per Risk Assessment Question # 11.

Attachments: #4 - Geologic Cross-Section, 6 pgs
#5 - Soil Information, 3 pgs
#6 - Boring Logs, 22 pgs

Hydrogeology

9 GW monitoring wells. 3 aquifers defined on site:
A = 9-14 ft
B = 25-40 ft
C = 45-47 ft (only 1 well, 36-DD)
Shallowest GW = 6 ft at T-2A
saturated zone = 8.5 ft, static GW = 6.8 ft
GW flow direction regionally in A and B aquifers = North
GW gradient in A aquifer = .001 ft/ft, B aquifer = .025 ft/ft.
Gradient on TRW property S to N = .0072 ft/ft
Conductivity in A = .01 to .1 cm/sec, B = .000073 to .035 cm/sec
Velocity in A = 12,000 to 100 ft/yr, average = 800 ft/yr
B = 490 to 0.9 ft/yr, average = 50 ft/yr

TRW in area of relatively continuous convex contours. A trough originating at AMD 901/902 travelling N-NW towards Stewart Dr, changes direction to N-NE and terminates at AMD 915; may be respone to localized pumping or local geology.

Preferred hydraulic communication exists from T-2A toward T-9A. Most permeable area around T-8A and T-9A.

Attachment: #7 - Hydrogeologic Information, 8 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions 1,2,3,4.

Total chemicals detected in GW = > 10 soil = 9

Major GW contamination = TCE (chemical stored on site)
only chemical tested in B and C aquifers (ppb):
A = 6,100,000 from T-2 West of solvent tank
B = 1,100,000 also "
C = 990 from 36-D, upgradient SE corner of property

Weiss report 12/84 gives TCE A aquifer plume dimensions as 500 ft wide by 500 ft to N of TRW property.

Other chemicals stored on site and detected (ppb):

Acetone	20,000
m-Xylene	1,800
p-Xylene	1,800

No analysis for noted IPA, Methyl alcohol.

Other major contaminants (ppb):

1,2 and 1,4 Dichlorobenzene	5,400
Tetrachloroethene	4,100
N-Butyl acetate	7,000

Major soil contamination in area adjacent to storage tank (ppb):
TCE = 31,000,000
7 other chemicals detected at >250,000

9/83 Tank excavated and found to have damaged fill neck, considered source of leak; soil also removed.

7/84 Soil analysis = TCE 15,000,000 ppb at E-11, 14 ft N of bldg, 11 ft depth.

Attachments: #8 - RWQCB Plume Maps for TCE, A and B Aquifer
#9 - GW and Soil Data, 6 pgs
#10 - TRW Correspondence re: Tank Leak
#11 - Weiss Report Plume Maps A and B Aquifer for TCE, TCA, PCA, Trans-1,2-DCE, Freon-113 10 pgs

D. Case Chronology

5/82	Facility Questionnaire completed
6/82	Phase I Investigation by Engineering Science (ES) Findings - soil and GW contamination original report not located
3/83	GW monitoring well installed by IECO Findings - GW contamination original report not located
7/83	6 monitoring wells installed by EMCON Findings - GW contamination original report not located
9/83	Investigation by Woodward Clyde Consultants (WCC) soil and GW contamination original report not located
9/83	Tank excavated, source of leak identified; soil removed
4/84	TCE concentrations continue high - 680,000 ppb
6/84	Plume migrating off-site to residential area CAO issued to TRW-AMD-Signetics
7/84	Remedial pumping begun on well T-2 A and B; Extraction well in place at excavated storage tank site; 48 cu yds soil excavated.

E. Current Status

6/84 CAO issued to AMD-TRW-Signetics
7/84 Weiss Asso conducting investigation for TRW

GW monitoring schedule: monthly

Attachment: #12 - CAO to TRW

References

1. **TRW report by Weiss Asso 12/3/84, Vol I**
2. **AMD report by ES 5/84.**
   Original reports by ES, IECO, EMCON, WCC not located.
   Facility Questionnaire (Attachment #3)
3. **TRW response to RA Summary**

EXAR-INTEGRATED SYSTEMS, INC.
750 Palomar Avenue
P.O. Box 62229
Sunnyvale, CA 94088

Site #: OG 58
File Name: Exar

Reviewed 9/10/84; 6/20/85

Reviewer: MCT

Facility: 1 building

A. Description of Site

Built in 1969, the site is leased from Stanford and Brigham Young Universities and is used to manufacture integrated circuits.

No information on prior occupants or use in file.

One - 1,000 gal underground unvaulted solvent tank contains:

Acetone	Isopropyl Alcohol
Freon	Hexamethyldisilazane
Xylene	

In addition, numerous vaulted tanks constructed in 1982 (including one - 1,000 gal acid neutralization tank and one - 1,000 gal caustic soda tank). (see Attachment #3 for locations)

Exar is in the process of installing a waste solvent line between their building at 750 Palomar and a building located immediately east on North Pastoria (2).

Attachments: #1 Site Location Map
#2 Site Location Map
#3 Site Map
#4 Facilities Questionnaire

B. Geology

Five borings; deepest 31.5 feet. General soil profile as follows:

0-8 ft.	Silty Clay
8-24 ft.	Silty sand and gravel*
24-31.5 ft.	Silty Clay

*This material probably represents buried stream channel deposits (2).

Soil classification per Risk Assessment Question #11.

Attachments: #5 Boring Log

Hydrogeology

1 aquifer layer defined. There is a clay layer below this upper aquifer that acts as an aquitard (see Attachment #6).

Five monitoring wells; deepest 31.5 ft.

Shallowest groundwater (GW) at 9.5 ft (1). GW flow North to Northeast (2). Map in Reference #2 not to scale so GW gradient cannot be calculated, no information on GW velocity in file.

Attachments: #6 RHC memo 3/21/84
#7 GW Elevation Map

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

Freon only chemical detected that was kept in the storage tank.

Soil contamination - none detected.

GW contamination - 6 chemicals. Major contaminants:

Methylene Chloride	750 ppb
trans-1,2-DCE	33 ppb
TCA	27 ppb

Methylene Chloride contamination in GW is thought to be a lab mistake by Kleinfelder report. Mary Beck from Foremost McKesson Labs repudiates this, however. Additional sampling showed no Methylene Chloride contamination but lab results not received by RWQCB (Attachment #10).

RHC believes contamination probably coming from offsite (Attachment #6).

Attachments: #8 Lab Results
#9 Contamination Maps
#10 RHC memo 5/1/84

D. Case Chronology

Leak Detection Program 1982

6/22/82 Facilities Questionnaire completed.

5/1/84 Phase I subsurface investigation by J.H. Kleinfelder & Associates received by RWQCB. Findings: low levels of contamination except for Methylene Chloride. Directed by RWQCB to resample.

7/30/84 RHC informed that new lab results showed no Methylene Chloride contamination.

9/6/84 RHC informed that 2nd set of lab results would be sent this date and that Exar-Integrated will meet with J.H. Kleinfelder and Associates about placement of permanent monitoring wells (Attachment #10)

1/85 Phase II report by J.H. Kleinfelder & Associates submitted. 4 borings/MWs constructed. Findings: GW contamination, no soil analysis performed.

<for a more detailed case chronology - see Attachment #9>

Attachments: #11 Exar-Integrated status report
#12 RHC memo 9/6/84

E. Current Status (as of 6/20/85)

Ongoing Phase II.

References
1. J.H. Kleinfelder & Associates Phase I report (3/84)
2. J.H. Kleinfelder & Associates Phase II report (1/85)
Misc. correspondence

MAGNEX CORPORATION
6850 Santa Teresa Blvd.
San Jose, CA 95119

Site #: OG 61
File Name: MAGNEX

Date Reviewed: 10/26/84

Reviewer: MCT

A. Description of Site

Magnex is owned by Exxon and is a manufacturer of thin film magnetic recording heads for computer disk and tape drives. They use a dry sputtering process in manufacture (PWJ memo 7/15/84).

Magnex constructed site 1979; startup in 1980. Prior use for agriculture. (1)

Site has 1-1,500 gal. acid neutralization system and 1-400 gal. waste solvent tank. Solvent waste tank contains:

Acetone	Methylene Chloride
Isopropanol	N-butyl Acetate
TCE	Methanol
Freon	Waste Oil
Methyl Ethyl Ketone	

See Attachment #4 for solvent balance analysis for solvents used on site since start-up in 1980.

Attachments:
- #1 Site Location Map
- #2 Site Map
- #3 Facilities Questionnaire
- #4 Addendum to facilities questionnaire, solvent balance analysis.

B. Geology

Soil profile interlayered fine sands and silty clays.

2 borings; deepest 66.5 ft.

Soil classification per Risk Assessment Question #11

Attachments: #5 Boring Logs

Hydrogeology

One aquifer layer defined. Groundwater (GW) encountered at 44 ft. (2) Only one monitoring well (MW) constructed to depth of GW so little hydrogeologic data. Regional GW gradient NW (Fairchild file).

2 MW; deepest 65 ft.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored onsite: Only Freon detected in GW, but non-detection of other solvents in Gw and soil samples suggest a source other than tank leakage. No onsite sources of Freon other than the underground tank are known at present. (2)

Soil contamination - 5 chemicals. Major contaminants:

Trichlorobenzene	14,000 ppb
Methyloxirane (Propylene Oxide)	5,160 ppb (1)

It has been suggested that chemicals detected in soil in Phase I investigation might be related to previous agricultural practices or chemical spraying performed during construction (2). Bottom of tank at approximately 7 ft. below grade - soil contamination detected from 11-13 ft. below grade in area of underground tank (2).

GW contamination - 1 chemical: Freon (400 ppb) (2)

Soil and GW contamination were detected at different wells and at different times.

Upgradient facilities - none found
Downgradient facilities - IBM
Fairchild located ~4,000 ft. East of Magnex site. PWJ states Freon/TCA data from this site should be incorporated into Fairchild investigation (PWJ memo 7/24/84)

MW Upgradient from Fairchild and downgradient from Magnex shows no contamination (Fairchild file).

Attachments: #6 Phase I lab results
#7 Phase II lab results

D. Case Chronology

Leak Detection Program 1982

7/20/82 PWJ and Gil Torres (SWRCB) inspect Magnex facility. Impetus for visit was increasing TCA detected in Well 17N1 which is just downgradient of Magnex.

8/24/82 Facilities Questionnaire received by RWQCB along with solvent balance analysis.

1/10/83 Proposal for subsurface investigation by J.H. Kleinfelder & Assoc. received by RWQCB.

1/24/83 RWQCB approves proposal for subsurface investigation.

4/21/83 Phase I subsurface investigation by J.H. Kleinfelder & Assoc. received by RWQCB. 1 boring/MW constructed but this MW did not encounter GW (to 35 ft.). Findings: Soil contamination detected, no GW analysis performed.

7/7/84 Phase II subsurface investigation by J.H. Kleinfelder & Assoc. completed. 1 boring/MW constructed to 66.5 ft. Findings: No soil contamination, only 1 GW contaminant detected (Freon @ 400 ppb).

7/24/84 PWJ memo recommends continued monitoring of existing well with additional sampling for Freon ASAP. It was considered unlikely that Freon in GW came from an on site source.

Attachments: #8 PWJ memo 7/24/84

E. Current Status (as of 10/26/84)

Ongoing Phase II

F. References

1. J.H. Kleinfelder & Associates Phase I report 4/83
2. " " " " " II report 7/84

Naval Air Station, Moffett Field
Mountain View, Ca 94035

Site #: OG 62
File Name: Moffett

Facility: 10 Sites
Date Reviewed: 6/84;4/85;5/85

Reviewer: LAP/LK

A. Description of Site

Previous use of site was agricultural.
Moffett Field was constructed as an air station in 1933; records show solvents used on site since 1940's; operations on site using solvents noted as aircraft squadrons, aircraft intermediate maintainence dept (AIMD), public works (PW) transportation, and paint shops.
Solvent wastes generated by Navy and by Air National Guard.

2 2000 gal underground non-vaulted waste solvent tanks;
installed 1979, East side of Hanger 3;
#1 = Navy tank; #2 = ANG (Air National Guard) tank;
contents not specified.

Other underground tanks: 10 fuel, 3 oil, 3 clarifier units.

9 sites identified with chemical use/disposal:

1 - Runway Landfill: Toluene, MEK, TCE, "solvents", transformer oil possibly containing PCB
2 - Golf Course Landfill: Toluene, MEK, TCE
3 - Marriage Ditch Road: TCE, "solvents", paint strippers
4 - Former Industrial Wastewater Holding Ponds: Toluene, MEK, Freon-113, TCE, TCA, Ethylene glycol
5 - Fuel Farm French Drains: fuel
6 - Runway Apron: "solvents"
7 - Hangers 2 and 3: Above ground atorage SE Hanger 3 = Freon, MEK, Toluene, Methyl Isobutyl Ketone, Acetone, TCA, Cleaning solvent type II PD 680, Alodine 1200s
8 - Waste Oil Transfer Area: "solvents", transformer oil possibly containing PCB
9 - Old Fuel Farm: AvGas

PCBs and miscellaneous unknown solvents stored at supply storage lot.

Adjacent facilities:
N = salt evaporation ponds owned by Leslie Salt Co; W = NASA Ames Research Center; E = Lockheed Missle & Space Co; S = Fairchild Camera and Instrument, NEC, Intel, Siltec, Raytheon.

Attachments:	#1 - Site Location Map	
	#2 - Facility Map	
	#3 - Facility Questionnaire	6 pgs
	#4 - Underground Tanks Information	18 pgs
	#5 - Chemical Usage/Sites	15 pgs
	#6 - Facility Information	5 pgs

B. Geology

Site underlain by series of heterogeneous interlayered lenses of sand and gravel in alluvial clay.
Deepest boring = 79 ft, 17-B.

Soil Classification per Risk Assessment Question # 11.

Attachment: #7 - Geologic Cross Section/Boring Logs 27 pgs

Hydrogeology

23 GW wells installed by Moffett;
5 GW wells by Fairchild on site = 63,64,65,66 -A, 4-B.

3 Aquifers identified:

EMCON 6/83 report lists	A aquifer = 8-20 ft depth
	B aquifer = 30-45 ft depth
	C aquifer = 63-73 ft depth

Other reports/facilities list
Upper Zone: A = 20 ft aquifer, B = 40 ft aquifer
Lower Zone: C = 185 ft aquifer

Shallowest GW = 1.5 ft, MW-19, 11/83

GW flow direction = N
S of Moffett Field and extending into Site 10, Chase Park area, GW flow = N-NW
Hydraulic gradient = .0036 ft/ft
Hydraulic conductivity = .008 cm/sec
velocity = .27 ft/day

Upper zone aquifers are confined and semi-confined; thin and discontinuous; with salt water intrusion;
Hydraulically connected near MW-15;
B aquifer absent near N and W of Hanger 2 and 3

GW for irrigation and drinking water obtained from Lower zone aquifer; Irrigation well S side of Macon Rd taps lower aquifer.

Attachment: #8 - Hydrogeologic Information 8 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions #1,2,3,4.

Total chemicals detected: GW = >10 soil = 9

Tank near NE corner Hanger 3 sampled 4/83 (ppb):

PD 680 Solvent	520,000,000
Total aliphatic hydrocarbon	460,000,000

GW contamination A aquifer, highest detection (ppb):

Trans-1,2-DCA	22,000	MW-4	8/84
TCE	7,900	"	4/83
2-Butene-1-ol	5,000	"	"
2.3-Diethyloxirane	4,000	"	"
Vinyl chloride	2,800	"	11/83
Trans-1,2-DCE	2,700	"	"
Toluene	2,200	"	4/83
Acetone	2,000	"	"
IPA	1,800	"	"

Freon-113, stored above ground near Hanger 3, detecccted at 20 ppb MW-1 and 2, 4/83.

B aquifer only contamination detected:

Xylene	40 ppb	17B	11/83
Toluene	4 "	17B	"
CC14	2 "	12B	"

Well 20B = all chemicals <1 ppb

Soil contamination highest detected (ppb):

TCE	230	MW-1	4/83
Toluene	127	MW-20A	11/83

Sources of Contamination:

1. EMCON reports note major source area NE Hanger 3, MW-4.
2. Navy IAS report 4/84 notes disposal methods for Sites 1 and 3-9; Site 9 had leaking AvGas tanks in 1965; not repaired, fuel farm abandoned.
3. RWQCB correspondence re: leaking underground tank near Hanger3

Attachments:	#9 - GW Data	11 pgs
	#10 - Soil Data	5 pgs
	#11 - RWQCB TCE Plume Map	
	#12 - EMCON Reports re:Source	4 pgs
	#13 - Navy IAS Report re:Source	6 pgs
	#14 - RWQCB Letter re: Leak	3 pgs

D. Case Chronology

9/82	Facility Questionnaire completed for RWQCB
4/25/83	EMCON Phase I subsurface investigation (4 GW wells) Findings - soil and GW contamination
6/83	EMCON installed 11 additional wells
8/83	RWQCB correspondence re: TCE contamination on site, and adjacent Fairchild plume
12/83	EMCON installed 7 additional wells
4/84	Navy IAS Report noting Sites of concern, disposal methods posing threat to environment
6/84	RWQCB correspondence re: leaking underground tank
7/84	Sampling of existing MWs
1/85	Earth Sciences Associates Proposal for Site
3/85	State of California letter re: plan for site

E. Current Status

4/85 OnGoing case
Earth Sciences Proposal for Sites 1-10 re: monitoring wells, soil samples

Attachment: #15 - Proposal for Sites 1-10 8 pgs

F. References

1. EMCON reports 4/83, 6/83, 12/83
2. Navy IAS Report 4/84
3. Earth Science Proposal 1/85
4. Correspondences 16 pgs

SPECTRA PHYSICS Site #: OG 63
2905 Stender Way, Santa Clara File Name: B:Spectra

Reviewed 6/84;1/30/85 Reviewer:LAP/ MCT

A. Description of Site

Spectra Physics (SP) leased this building from 1974 to Jan. 1981. At present this building is leased by Synertek (Bldg #6). During leasing period SP operated a liquid chromatograph which generated small amounts of methanol (47-50%), Acetone (~2.5%) and water (~50%). This waste solution was stored in a partially buried (1/3 underground, 2/3 above ground) waste tank. Information on former occupants and use not in file.

A complete list of chemicals used on site not in file.

Attachments: #1 Site Maps
#2 Facilities Questionnaire

B. Geology

One soil sample taken 3 to 4.5 feet below grade (0 to 1.5 ft. below tank bottom) at time of tank excavation (1). Soil was characterized as brown silty clay (1). No borings done, no description of soil profile in file.

Hydrogeology

No monitoring wells installed so little hydrogeologic data available. Regional GW gradient N-NE at 0.4% (from Synertek file).

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: Methanol and Acetone detected in soil; no GW analysis performed.

Soil contamination - 2 chemicals. Major contaminants:

Methanol	1,400 ppb
Acetone	310 ppb

GW contamination - no GW analysis performed.

Attachments: #3 Lab Results 2/83

D. Case Chronology

Leak Detection Program 1982

10/19/82	Facilities Questionnaire received.
1/12/83	SP letter dated 1/6/83 received by RWQCB asking for approval of tank removal proposal submitted by J.H. Kleinfelder.

1/13/83	AWO approves above proposal by phone.
1/18/83	Tank excavation performed by Petroleum Engineers of Santa Rosa, CA. (1).
5/83	Geotechnical Investigation Report by J.H. Kleinfelder & Associates completed. One soil sample analyzed. Results: soil contamination.
6/23/83	RWQCB informs SP that further investigation is necessary (Attachment #4).
1/20/85	Letter to MRK from SP received, including proposal for cleanup and brief case chronology.
No date	RJC case transfer form calls SP contamination "minor" - no further action at this time (Attachment #6).

Attachments: #4 RWQCB letter 6/23/83
#5 SP letter 1/17/85
#6 RJC case transer form

E. Current Status (as of 1/30/85)

Ongoing investigation. RKM is preparing a letter asking for a well near tank.

F. References

1. Geotechnical Investigation Report by J.H. Kleinfelder 5/83

BECTON, DICKINSON & CO. Site #: OG 66
14300 Winchester Blvd. File Name: Becton
Los Gatos, CA

Reviewed 7/84;4/9/85 Reviewer:LAP/ MCT

A. Description of Site

The facility was built in 1962 in an area previously used for agriculture. The area surrounding the site has been developed primarily for commerical and light-industrial uses in recent years. Operation of the facility, used for production of plastic medical gloves, requires the use of plasticizers (phthalate compounds) and Stoddard Solvent. Until May 1983, Stoddard solvent was stored in an underground tank adjacent to well W-1. Use of this underground tank has been discontinued and the tank is scheduled for removal in June 1985 (5).

As originally constructed in 1963, drums containing phthalates were stored on an unpaved surface which is now the location of the facility research and development laboratory. Phthalates are now stored in above-ground tanks just west of the now-empty Stoddard Solvent tank. The phthalate tank farm is concrete-lined and is scheduled for construction of additional containment capabilities (3).

Bis (2-ethyl hexyl) phthalate has been in use as a primary plasticizer at this location since 1962 in the manufacture of medical gloves. Butyl benzyl phthalate was utilized until 1974 when the product requiring its use was discontinued. The Di-n-Butyl phthalate was used only in laboratory scale development work and was never purchased in production quatities. According to Becton-Dickinson records, Diethyl phthalate has never been used in this operation (2,3).

1 - 500 gal. nonvaulted underground Stoddard solvent storage tank on site. Bottom of tank is ~7 ft. below grade. Tank has not been in use since May 1983 (2).

Site is located next to Los Gatos Creek and upstream of the SCVWD groundwater recharge facility.

Attachments: #1 Site Maps
#2 Facilities Questionnaire

B. Geology

The upper 20 ft. of sediments are composed mostly of gravels with smaller amounts of sand and silt. Below this layer sandy silts and sandy clays with weathered gravel are present (3).

12 Borings; deepest 120 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs
#4 Geologic Profiles

Hydrogeology

Shallowest groundwater (GW) encountered at 24 ft. GW flow N-NW, with a gradient of 15-30% in the immediate vacinity of Los Gatos Creek, and 1.7% further away. Velocity of GW flow in horizontal direction calculated to be ~50 ft/yr, based on assumed effective porosity of 20%, hydraulic conductivity of 10 gpd/ft2 and a gradient of 2% (3).

10 Monitoring Wells (MW); deepest 115 ft. (one MW off-site (5))

Los Gatos Creek acts as a constant line-source of GW recharge; it is a perrenial stream fed by three reservoirs operated by SCVWD (Lake Elsman, Lexington Reservoir, and Vasona Reservoir) to maintain GW recharge. Recharge occurs via the creek bottom and the Los Gatos percolation basin. The latter is located at an abandoned gravel pit just downstream of the Becton-Dickinson plant. Recharge results in higher GW levels in the vicinity of the creek and lower levels away from the creek, causing shallow GW flow to be slightly different than regional flow (NE) (3).

4 wells within 1/2 mile of facility; 5 more wells within 1 mile. Closest well to site (0.3 mile) municipal well (3).

Attachments: #5 Hydrogeologic information
#6 GW contour maps
#7 Well location maps

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: Stoddard solvent, Bis (2-ethyl hexyl) phthalate, and Butyl Benzyl phthalate detected in both soil and GW. Di-n-Butyl phthalate detected in GW only.

Soil contamination - 4 chemicals. Major contaminants:

Stoddard Solvent	23,000 ppm
Bis (2-ethyl hexyl) Phthalate	130 ppm

GW contamination - 5 chemicals. Major contaminants:

Bis (2-ethyl hexyl) Phthalate	8.8 ppm
Stoddard Solvent	6 ppm

Spills or leaks from chemical barrel storage area may be responsible for phthalate contamination. Chemicals stored in this area were heald and transferred in drums placed on a previously unpaved surface directly upgradient from Well W-2. This storage practice was abandoned several years ago; these chemicals are now stored in above-ground containers on paved surfaces (3).

The depth of solvent contamination beneath the Stoddard Solvent tank less than 100 feet based on Phase IIC report (5). Highest concentration of Stoddard Solvent found adjacent to tank at ~8 ft. depth - consultants state this was at an interface between high and low permeability soil (i.e. that a ponding effect occurred) (4). Levine•Fricke states Phase IIB results indicate a localized on-site problem (3); Phase IIC results support this conclusion. Contamination has not been detected above background levels in Los Gatos Creek (5).

Lab Results for MW-8 in file but cannot find on well location maps or Boring Logs (converted Boring #8?).

Attachments: #8 Lab Results
#9 Contamination Map

D. Case Chronology

Leak Detection Program 1982

5/25/82 Facilities Questionnaire received.
12/16/82 Phase I proposal received.
1/4/83 RWQCB letter OK's Phase I proposal except for revision of analysis for Stoddard Solvent.
6/1/83 Phase I - Geotechnical Investigation report by J.H. Kleinfelder received. 1 Boring/MW to 36 ft. Stoddard Solvent detected in both soil and GW.
6/20/83 RWQCB letter requires further investigation.
7/8/83 RWQCB letter summarizes 7/7 meeting.
8/18/83 Phase II proposal received.
8/25/83 RWQCB letter requires Phase II investigation (Attachment #10).
10/11/83 Becton & Dickinson letter received agreeing to proceed with Phase II investigation (Attachment #11).
3/27/84 Phase II report by J.H. Kleinfelder and Associates received. 7 borings; 4 MWs; deepest 51.5 ft. More extensive soil and GW contamination detected.
5/15/84 RWQCB letter summarizes 5/11 meeting, discusses next phase of investigation (Attachment #12).
6/29/84 Phase IIB proposal received.
7/9/84 Clarification of proposed work plan by Levine•Fricke completed.
8/20/84 Central Santa Clara County Fire Protection District letter to Becton-Dickinson requires removal of tank within 30 days (Attachment #13).
9/27/84 McKesson Environmental Services letter with analysis of constituents of Stoddard Solvent (Attachment #14).
10/15/84 Phase IIB - Hydrogeologic Assessment report by Levine• Fricke received. 3 MWs: two shallow (60 ft.); one deep (115 ft). Hydrogeologic, contamination data.
11/13/84 Soil Sampling results by Levine•Fricke received. 4 borings to 30 ft. Highest soil concentrations of chemicals detected.
11/16/84 During meeting with Becton it was agreed to delay tank removal pending final approval of contaminated soil removal program (5).
3/12/85 RWQCB letter acknowledges receipt and acceptance of

Phase IIC Work Plan with exception of requiring a toxicological evaluation of Stoddard Solvent and phthalates in the work plan (Attachment #15).

3/25/85 Under the Phase IIC work plan, 3 MWs completed, one off-site, and water samples tank for analysis (5).

4/22/85 Levine*Fricke letter received concerning RWQCB request for additional information on the proposed soil excavation proposal (5).

Attachments:
- #10 RWQCB letter 8/25/83
- #11 Becton-Dickinson letter 10/7/83
- #12 RWQCB letter 5/15/84
- #13 Santa Clara Co. Fire District letter 8/20/84
- #14 McKesson Environmental Services letter 9/27/84
- #15 RWQCB letter 3/12/85

E. Current Status (as of 4/9/85)

Ongoin Phase II.

F. References

1. Geotechnical Investigation by J.H. Kleinfelder and Associates 5/83.
2. Phase II report by J.H. Kleinfelder & Associates 3/84.
3. Hydrogeologic Assessment - Phase IIB by Levine*Fricke Consultants 10/84.
4. Soil Sampling results by Levine*Fricke 11/84.
5. Becton comments dated 5/10/85.

FORD MOTOR COMPANY Site #: OG 67
1100 South Main St. File Name: B:FORD
Milpitas, CA

Reviewed 7/6/84; 3/20/85 & 5/31/85 Reviewer: MCT

A. Description of Site

Facility constructed in 1954, used as an auto and truck assembly plant (1). Ford ceased manufacturing operations in May 1983 and sold the property to MFCO Associates on December 21, 1984 (6). No information on former occupants or use is in the file.

29 non-vaulted tanks and/or pits on site - 28 of the tanks were used for various process liquids and one contained waste liquids. All of the underground tanks have been removed with the exception of one 500 gallon diesel fuel tank which serves emergency fire water pumps (6) (for locations, see Attachment #1).

Wastewater ponds have been used onsite since 1954 for waste process waters. 2 current ponds constructed in 1965 in northern portion of site. Ponds 75′ x 240′ x 7′ deep - each is designed to contain 340,000 gal. Ponds unlined (1). The settling ponds received only process wastewater. Waste oils, solvents and other non-wastewater compatible wastes were stored in the waste liquid underground tank and hauled offsite (6).

For list of paint solvents used onsite, see Attachment #3.

Attachments: #1 Site Maps
#2 Facilities Questionnaire
#3 Paints Solvents Used Onsite

B. Geology

The site is underlain primarily by a gray to black silty clay containing clayey sand and gravelly sand interbeds. The silty clays occur from the surface to depths of approximately 20 to 30 ft.; sandy and gravelly lenses within this zone vary from several inches to 2 to 5 ft. thick and locally may be 10 to 16 feet thick in the northwestern portion of the site (4). Clayey to silty sands underlie the near surface clay section. These sands were encountered in deeper borings with total depths of 35 to 51 ft (5).

35 borings; deepest 51 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Logs
#5 Geologic Cross-Sections

Hydrogeology

2 aquifer layers defined.

"A" aquifer defined as coarse-grained interbeds in near surface clay layer noted above (4). Silty clays underlie the zone of sandy interbeds between depths of ~15-29 ft. and form the aquiclude between the "A" aquifer and deeper aquifers (4).

"B" aquifer encountered at ~41 ft (5). "B" aquifer varies between 4 and 9 ft. thick (4). Silty clay aquicludes underlie the "B" aquifer below depths of 39 to 46 ft (4).

Shallowest groundwater (GW) encountered at ~4 ft. GW flow NW (4). Static water levels in the "B" aquifer wells (MW-19 and MW-20) were found to be higher than adjacent shallow "A" wells (MW-18 and MW-14, respectively)(4).

20 Monitoring Wells (MW); deepest 51 ft.

Newark aquifer immediately beneath site. Consultants believe that Lower Penitencia and Coyote Creek are seasonally fed by discharge from the shallow "A" aquifer (4).

Permeabilities of clays from 5.5-15 ft. estimated to be between 3 x e-6 to 5 x e-8 cm/sec - resultant vertical GW velocities <1 ft/yr. Most site soil classified "CL" by USCS.

Attachments: #6 Hydrogeologic Information

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: Toluene detected in both soil and GW, Xylene detected in soil and tentatively identified in GW, MEK detected in GW only.

Soil contamination - 12 chemicals. Major contaminants:

Xylene	91 ppm
Bis(2-ethyl hexyl) Phthalate	23 ppm

GW contamination - 22 chemicals. Major contaminants:

2-Ethyl 4-Methyl 1-Pentanol	20 ppm
Ethylbenzene	2.8 ppm

RWQCB considers settling ponds and the treatment/slop tank to be separate sources of contamination (Attachment #11).

Underground tanks and settling ponds show contamination in first saturated zone. The ponds received waste from phosphate rinse, chromate rinse, caustic cleaning tanks, spray paint booths, and all other industrial waste, except for spilled process waste (thinners, oils, greases) which were picked up by IT. Waste was treated with ferric chloride, sulfuric acid, lime, and polymer prior to discharge to the pond (JEC memo 9/29/81). Metal sludges which are settled are removed for offsite disposal (HJS memo 8/31/81). Sludge was considered hazardous by DOHS because of high metal (Ni,Cr,Pb,Zn) content. Visible sludge and 6-8" residual soil removed from lagoon area as part of closure procedure (Ford letter 3/5/84) - DOHS, EPA holding off on finalizing closure until all GW contamination is cleaned up (GW verbal communication 3/20/85).

There is a question as to whether or not the settling ponds resulted in contamination of the first saturated zone. The trace concentrations of organics detected are not indicative of the materials passing through the settling ponds (6).

Ford first assumed major pollutant in MWs 4,6,7,8 & 9 gasoline due to high pentane and benzene levels in GW (Attachment #10). In later correspondence Ford now believes this contamination more likely indicative of mineral spirits paint solvent (6). DME (5/19/83) states spills of fuel and/or aliphatic solvents as well as plasticizers have probably occurred.

9 concrete tanks used to contain spraybooth water - sample of water contained:

5.0	ppm	2-heptanone
1.9	"	Methylene Chloride
1.5	"	2-butanone
<1.0	"	Other Volatiles (not mentioned)

Tanks have been cleaned and emptied (Ford letter 12/9/83).

Contaminated soil in the vicinity of the only two tanks found leaking was removed (6).

Many tentative ID's of chemical contaminants (mostly pentanes and benzenes) - have only included confirmed ID's in findings.

MWs 4 & 8 seem to have highest contamination - this is unsettling since 2 MWs (6 & 7) in between them have relatively little.

Ford contends there is "no potential" for downward flow of organics found in the upper aquifer to the lower aquifers and because of this believe further cleanup efforts not warranted (Ford letter 7/9/84). SWRCB comments that Emcon report is too vague and incomplete to warrant many of the conclusions drawn from the investigation (Attachment #13).

Facilities in vacinity: Jones Chemical, Sierra Chemical, Pierce & Stevens, Great Western Chemical. Nearest facility UG Jones Chemical - common contaminants Benzene & Toluene. Federal Pacific is also located immediately upgradient of the plant (6).

Attachments: #7 Lab Results
#8 RWQCB plume maps

D. Case Chronology

Leak Detection Program 1982/Closure of settling ponds.

2/26/82	Ford requests waiver from RWQCB for implementation of a GW monitoring system.
4/6/82	RWQCB denies waiver.
7/1/82	Facilities Questionnaire received.
8/82	"Hydrogeologic and Soil Engineering Study - Wastewater Basins" report by Emcon Associates. Study of settling pond area. 5 borings - no chemical analysis performed.
10/25/82	RWQCB waives requirement for California lab certification of Michigan analytical lab (Encotec) used by Ford.
12/14/82	RWQCB refuses Ford's alternative leak detection investigation proposal.
3/24/83	RWQCB receives Partial Closure Plan by Ford for settling ponds (Attachment #9).
5/19/83	Ford letter received with Emcon investigation results. 7 additional wells installed (#5-11). Findings: Soil & GW contamination.
7/5/83	Ford letter received with additional sampling results.
11/23/83	DOHS letter to Ford with requirements for closure.
12/9/83	Ford responds to DOHS letter 11/23/83.
1/24/84	RWQCB requires additional investigation in settling pond area - gasoline appears to be major pollutant (Attachment #10).
2/29/84	Ford letter with proposal for further investigation received.
3/12/84	Ford letter received with soil sampling results from settling pond borings. Soils tested for Ni, Cr, Pb, Zn.
4/13/84	RWQCB letter states settling ponds considered a separate source of contamination than treatment tanks. Requirement for further investigation also included. (Attachment #11)
6/84	Emcon Hydrogeologic report completed. 9 borings/MWs installed; deepest 51 ft. 15 additional borings by Wahler Associates also cited but no reference or logs in file. Pump test performed, no chemical analysis done.
6/27/84	Ford letter to DOHS notifying them of removal of underground liquid waste storage tank and excavation of apparently contaminated soils around the tank. Ford contends that adequate excavation of soil has been completed and that backfilling should commence. Lab results from samples of remaining soil included.
7/9/94	Ford letter contends that no further cleanup is warranted at site based on results of Emcon report 6/84 (Attachment #12).
8/1/84	DOHS letter to Ford with requirements for closure document.
8/13/84	Ford letter received with chromatograms and mass spec data for GW samples collected 3-4/84.
8/31/84	SWRCB memo comments on 6/84 Emcon report - general comment that report is too vague and incomplete to warrant many of the conclusions drawn from the investigation (Attachment #13).

9/13/84 Ford letter with additional Emcon sampling results received. Leak found in nearby sanitary sewer is thought to influence water quality in MW #18 (Attachment #14).

9/27/84 Ford letter to DOHS with closure document.

10/22/84 City of Milpitas letter to Ford documenting agreement to stop discharging pumped well water into sanitary sewer system.

11/20/84 Ford letter received with additional boring logs for site.

12/10/84 Ford letter received with GW elevation data and analytical results from MW #2,11,18 sampled 11/12/84. Sampling shows lower contaminant levels.

12/10/84 RWQCB summarizes results of 11/27/84 meeting with Ford and includes issues to be addressed in further investigations (Attachment #15).

1/23/85 Ford letter received with latest sampling results and Emcon proposal for further investigation (Attachment #16).

2/27/85 RWQCB letter with qualified acceptance of 1/23/85 investigative proposal (Attachment #17).

3/20/85 Ford reply to conditions specified in RWQCB letter of 2/27/85.

4/8/85 RWQCB approval of modified proposal of 1/23/85.

5/16/85 Ford submits comments on 205j case summary.

Attachments:
#9 Partial Closure Plan 3/21/83
#10 RWQCB letter 1/24/84
#11 " " 4/13/84
#12 Ford " 7/9/84
#13 SWRCB memo 8/31/84
#14 Ford letter 9/13/84
#15 RWQCB " 12/10/84
#16 Ford " 1/23/84
#17 RWQCB " 2/27/85

E. Current Status (as of 3/20/85)

Ongoing Phase II - Site sold to Mariani Development but Ford has continuing responsibility for GW cleanup. Closure delayed until GW problem remedied (GW verbal communication 3/20/85).

F. References

1. Wastewater Basin Investigation by Emcon Associates 8/82
2. Emcon Associates data 1/83*
3. " " " 5/83*
4. Hydrogeologic Report by Emcon Associates 6/84
5. Proposal for Further Investigation by Emcon Associates 12/84
6. Ford comments on 205j case summary 5/16/85

Misc. Correspondence

*Data received disembodied from reports attached to cover letters by Ford.

SOLVENT SERVICE, INC.
1021 Berryessa Road
San Jose, CA 95133

Site #: OG 68
File Name: SSI

Date Reviewed: 9/26/84

Reviewer: MCT

A. Description of Site

Solvent Service (SSI) treats waste from other generators. No information on specific site operations, length of occupancy, previous occupants or use in file.

Site contains:

- 1 vaulted storage tank - installed 1982.
- 2 treatment tanks - used from 1979 until removal in 1982.

First solvent storage tank on site used from 1970 until removal in 1981 (1).

Contituents of chemicals stored in tanks varies - breakdown from facilities questionnaire as follows:

Water	94 to 98%
Sludge	3 to 6%
Solvents	1 to 3%
Phenols	less than .01%
Water soluble salts	less than .4%

See Attachment #3 for monthly waste report with examples of waste types - no information on specific chemicals treated in file.

Residential development to SW of site; Industrial developments to SW of site; Open fields to N & NW (1).

There is a low spot topographically in the treatment and storage area of the site approximately 60 ft. south of the waste solvent storage area. The area is currently paved with concrete but has not been paved with concrete for the entire history of the operations at this site. Solvent trucks often unload in the area. Small puddles of standing water occur in this area during rainy periods. The barrel storage area houses a large number of 55 gal. drums for storage of solvent materials - there is a high rate of turnover in this area. (2)

Attachments:
#1 Site Location Map
#2 Facilities Questionnaire
#3 SSI Monthly Waste Report

B. Geology

Site underlain by interlayered fine sands and silty clays.

10 Borings; deepest 74.5 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Logs
#5 Soil Profile/Site Map

Hydrogeology (all data from Phase II report)

Two aquifer layers defined.
"A" Aquifer 5-12 ft. deep in NE portion of site
10-18 ft. " " SW " " "
Groundwater (GW) ~6 ft. Steepest Gradient 1.5%. GW flows to the northeast. Field Est. Permeabilities - .001 to .00001 cm/sec.

"B" Aquifer 60-69 ft. (data from 1 Monitoring Well only). First water encountered at 60 ft. - GW level rose 14.5 ft. during drilling. Report suggests (using water level data) that "B" aquifer is an Artesian aquifer & that aquifers A & B do not communicate in the vicinity of the site. Field Est. Permeabilities - .01 to .001 cm/sec.

Clayey stratum between A & B 12-60 ft deep. Field Est. Permeabilities - .00001 to .000001 cm/sec. Field Est. Permeabilities of soil under B aquifer - .00001 to .000001 cm/sec.

7 Monitoring Wells (MW); deepest 70 ft.

Drainage of the site is into the main course of Coyote Creek approximately 1250 ft. to the north and northwest of the site.

2 wells in vicinity of site (see Attachment #1 for locations).

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: No determination can be made because no information on specific chemicals stored on site in file.

Soil contamination - 10+ chemicals. Major contaminants:

Cyclohexane - 1,2,3-trimethyl	2,500 ppm
Acetone	1,500 ppm

GW contamination - 10+ chemicals. Major contaminants:

A Aquifer -	Methylene Chloride	550 ppm
	Acetone	200 ppm
B Aquifer -	Trichloroethylene	3 ppm
	Tetrachloroethylene	0.7 ppm

Extensive Soil & Water contamination in solvent storage areas - more MWs needed to more clearly define source. Contamination plume goes offsite. No known source upgradient (UG).

Attachments: #6 Lab Results 10-12/83
#7 RWQCB plume maps

D. Case Chronology

Leak Detection Program 1982

5/28/82	Facilities Questionnaire recieved by RWQCB
6/16/83	Phase I subsurface investigation by Applied Earth Consultants (AEC). 1 Boring/MW constructed. Findings: Soil and GW contamination.
7/28/83	AEC Phase II proposal received by RWQCB.
8/1/83	RWQCB sends AEC requirements for Phase II proposal.
8/25/83	Revised AEC Phase II proposal received by RWQCB.
9/2/83	RWQCB requires additional revisions of Phase II proposal.
9/15/83	Revised AEC Phase II proposal received by RWQCB.
3/8/84	Phase II subsurface investigation by AEC received by RWQCB. 9 Borings, 6 MWs constructed. Findings: Soil and GW contamination, additional hydrogeologic data collected. Plume extends offsite.
4/2/84	AEC proposal for additional studies received by RWQCB.

E. Current Status (as of 9/26/84)

Ongoing Phase II

F. References

1. Applied Earth Consultants Phase I report 6/16/83
2. Applied Earth Consultants Phase II report 1/27/84

PRECISION MEDIA CORPORATION Site #: OG 69
1262 N. Lawrence Station Road File Name: PMC
Sunnyvale, CA 94086

Facility: no information on number of buildings

Date Reviewed: 9/5/84 Reviewer: MCT

A. Description of Site

Company currently bankrupt, site not in operation. Previously manufactured video tapes and computer floppy disks (see Attachment #4)

Previous occupants Allied Media Technology (AMT); Precision Media Corp. (PMC) purchased assets of AMT 3/4/83 (see Attachment #12).

Precision Media wholly owned by ECOM Developement Co., Winchester Blvd., San Jose (Director - Abdunabi Yasin). ECOM owns all stock - purchased about one year ago. (see Attachment #5)

Property Owners:	Mr. & Mrs. Ricci	Joseph J. Stephani
(see Attachment	1750 Cordilleras Rd.	7130 Fairfield Drive
#6)	San Jose, CA	Santa Rosa, CA

5 buried solvent tanks - 3 containing Cyclohexanone, 1 containing reclaimed Methyl Ethyl Ketone (MEK), 1 for other used chemicals (including MEK, Cyclohexanone, and Toluene).

Attachments:
- #1 Site Location Map
- #2 Site Map
- #3 Facilities Questionnaire
- #4 RHC memo 6/7/84
- #5 RHC memo 6/13/84
- #6 RHC memo 7/30/84

B. Geology

Site underlain with mostly clayey silt to 14 ft. and silty clay from 14-25 ft. (Only one boring log available - well dug north of underground tanks - see Attachment #2 for location)

Soil Classification per Risk Assessment Question #11

Attachments: #7 Boring Log

Hydrogeology

1 Monitoring Well (MW) 25 ft. deep. Groundwater (GW) encountered at 8.7 ft. (see Attachment #7).

Only 1 aquifer layer noted, depth range not defined. No information on GW direction, gradient, or velocity in report.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For Chemicals used on site: Methyl Ethyl Ketone and Cyclohexanone were detected in both soil and GW; Toluene was detected in GW only.

Soil Contamination - 2 chemicals. Major contaminants:

MEK	12,000 ng/g
Cyclohexanone	4,000 ng/g

Soil samples were taken at depth intervals of 2.0-3.5 ft and 7.0-8.5 ft (see Attachment #7) and analyzed as a soil composite.

GW Contamination - 10+ chemicals. Major contaminants:

MEK	37,000 ppb
Cyclohexanone	15,000 ppb
Toluene	790 ppb

UG well used by mobile home park for lake water only - found no contamination (see Attachment #9).

20 ft. City of Sunnyvale monitoring well (see Attachment #9) - New county ID# D02H - no info on water quality status. Well DG.

RHC believes ground spillage predominates over tank leakage contamination (see Attachment #4).

Since only 1 MW, no RWQCB plume maps drawn.

Attachments: #8 Soil and GW Analyses (3 pages)
#9 Map of nearby wells

D. Case Chronology

Leak Detection Program 1982

6/2/82	Facilities Questionnaire completed (Attachment #3).
11/16/82	Lanny Bauer of AMT called DME to argue against requirement for site investigation. Call was followed by a letter to DME dated 11/17/82 (Attachment #10).
12/21/82	AMT agreed to perform subsurface investigation by 8/1/83 (Attachment #11)
3/4/83	PMC purchased assets of AMT (Attachment #12).
8/4/83	PMC pleads ignorance of agreement to do subsurface investigation (Attachment #12)
8/12/83	RWQCB informs PMC of their responsibility to conduct a subsurface investigation (Attachment #13).
8/19/83	PMC agrees to do subsurface investigation (Attachment #14).
1/18/84	RWQCB informed by PMC that subsurface investigation was underway (Attachment #14).
3/19/84	PMC files Chapter 11 bankruptcy (Attachment #15).

4/6/84	Subsurface investigation report by International Engineering Company received by RWQCB. Findings: Soil and GW contamination of chemicals similar to those stored onsite. Further investigation required to find extent of contamination.
4/26/84	PMC explains to RWQCB that the company has no money for further investigations and that any additional expenditures by the company would require a court order. PMC also contends that contamination was due to previous occupants and not to leaking tanks (Attachment #16).
5/29/84	RWQCB directs present and previous owners and operators of property to make coordinated effort to finance additional subsurface investigations (Attachment #17).
6/7/84	Based on site visit RHC believes chronic ground spillage predominates over tank leakage contamination (Attachment #4).
6/13/84	PMC proposes methods of subsurface investigation but gives no timeframe due to financial constraints (Attachment #18)
6/13/84	Richard Halverson from Precision Media says no way ECOM Developement Co. (owner of PMC) can be held responsible for cleanup of site; Mr. Halverson's salary is paid by ECOM. (Attachment #6)
6/14/84	The City of Sunnyvale states that PMC has no permits with the City of Sunnyvale Dept. of Public Safety to store, handle, or use the involved hazardous materials. If hazardous materials are not removed by 6/21/84, the Dept. of Public Safety will seek criminal prosecution through the Office of the City Attorney (Attachment #19).
6/20/84	PMC informs RWQCB that it was forced to file Chapter 7 bankruptcy 6/15/84. All assets of the company are to be liquidated. (Attachment #20)
6/22/84	City of Sunnyvale decides not to prosecute PMC because they cannot collect civil fines (Attachment #21).
6/24/84	Article on PMC appears in San Jose Mercury News (Attachment #22).
6/28/84	City of Sunnyvale to prepare order asking bankruptcy judge to give City administrative priority to use residual PMC assets for cleanup (Attachment #23).
6/29/84	Sunnyvale Fire Dept. contracts IT Corp. to pump solvent tanks (Attachment #24).
7/10/84	Availability of Super Fund money discussed (Attachment #25).
7/26/84	IT Corp. pumps all tanks dry (Attachment #26).
7/31/84	Request by Mr. Ricci (joint owner of property) for 30 day extension on proposal for subsurface investigation due 8/4/84 (Attachment #27).
8/31/84	Lawyers for Mr. Ricci trying to get bank to assume responsibility for initial study (Attachment #28)

Attachments:	#10	AMT	letter	11/17/82
	#11	AMT	"	12/21/82
	#12	PMC	"	8/4/83
	#13	RWQCB	"	8/12/83

#14 PMC " 1/18/84
#15 PMC " 4/17/84
#16 PMC " 4/26/84
#17 RWQCB " 5/29/84
#18 PMC " 6/13/84
#19 City of Sunnyvale letter 6/14/84
#20 PMC letter 6/20/84
#21 RHC memo 6/22/84
#22 San Jose Mercury News article 6/24/84
#23 RHC memo 6/28/84
#24 RHC " 6/29/84
#25 RHC " 7/10/84
#26 RHC " 7/30/84
#27 Letter to RWQCB from Mr. Ricci, 7/31/84
#28 RKM memo 8/31/84

E. Current Status (as of 9/5/84)

RHC to call Mr. Ricci next week about status of financing.

RWQCB may take legal action under Section 13268(a) (i.e. failure or refusal to furnish a technical report).

References

International Engineering Co., Inc. (2/84) report.
Misc. correspondence

KTI Chemicals, Inc. Site #: OG 70
1170 Sonora Ct, Sunnyvale 94086 File Name: KTI

Facility: 2 Bldgs
Date Reviewed: 7/2/84;12/84 Reviewer: LK

A. Description of Site

Facility constructed 1973; leased from Crown Properties by Union Carbide for KTI; KTI occupancy since 1974/75.
No information re: previous use of site.
Facility operations are repacking, blending, and filtering of photo chemicals for Silicon Valley industries.

3 8000 gal underground non-vaulted solvent storage tanks installed 1979; bottom of tank 11 ft below grade.
1 1000 gal underground vaulted acid waste tank, installed 1979; only dilute acids (5%) discharged to tank.
1 500 gal non-vaulted tank for emergency overflow, installed 1971, never used.

Chemicals on site: Xylene, N-butyl acetate, Odorless Mineral Spirits (OMS), Isopropyl alcohol (IPA), Acetone, Stoddard Solvent.
Acids in treatment unit: Phosphoric, Acetic, Nitric, HFl.

Attachments: #1 - Site Location Map
#2 - Facility Map
#3 - Facility Questionnaire, 6 pgs
#4 - UIC Program, 4 pgs

B. Geology

Soil site stratigraphy characterized by silty clay, and sand & gravel.
4 Borings on site.

Soil Classification per Risk Assessment Question # 11.

Attachment: #5 - Boring Logs/Key, Soil Stratigraphy, 6 pgs

Hydrogeology

1 aquifer defined. 3 GW Monitoring Wells (MW) on site.

Shallowest GW is 11.1 ft at MW-4 (bottom of storage tank is 11')
GW flow is Easterly. A new localized shallow GW flow direction exists to the SE towards a dewatering sump near Lawrence Expry/ Central Expry intersection.
Gradient not given; raw data not given to calculate. N of KTI gradient = .005 ft/ft.

Attachment: #6 - GW Information, 2 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions 1,2,3,4.

Total chemicals detected: soil = 1 GW = 5.

Major contaminant is OMS in soil and GW (ppb):
soil = 650,000 at 11-11.5 ft GW = 200,000 at MW-4

OMS in deep soil bottom of tank farm excavation but not shallow soil.
5/84 Kleinfelder report notes low recovery of spiked sample reported, possibly indicating higher levels of OMS on site.

Analytic result difference noted in GW sample 3/17/83 between organic and aqueous layer. Acetone, N-butyl acetate, IPA (chemicals on site) not analyzed in aqueous layer.

6/83 Leak detected eminating from union in line connecting mineral spirit tank to main bldg, located 2 ft below grade. Repaired 7/83.

Attachments: #7 - RWQCB OMS plume Map
#8 - Soil/GW Data, 10 pgs

D. Case Chronology

5/82 Facility Questionnaire completed for Leak Detection Program (Attachment #3).
6/83 Leak detected from OMS tank on site (Attachment #6, pg2)
7/83 Phase I investigation completed by J.H.Kleinfelder & Asso
Findings = GW contamination, 1 MW
no soil contamination at 10 ft depth
(Attachment #8, pg4)
5/84 Phase II investigation by Kleinfelder & Asso
Findings = Hydrogeologic data, except gradient.
Plume map for OMS not drawn in report.
Contamination greatest at MW-4.
Soil contamination at 11, 13 ft = OMS.
9/84 Kleinfelder report updated to include reference to Tables 3 and 4 (no new info); GW gradient and plume map not included
11/84 KTI response to RA Summary states OMS plume defined to N & W, investigating SE. However no data to define plume perimeter to N or W.

E. Current Status

6/84 Quarterly GW sampling

F. References

1. J.H.Kleinfelder & Asso reports 7/83, 5/84.
2. KTI response to RA Summary

Pacific Nursery Pots
1015 Martin Ave, SC

Site #: OG 71
File Name: PPOT

Facility: 4 Bldgs
Date Reviewed:12/84

Reviewer:LAP/LK

A. Description of Site

No info re: previous use of site.
Facility on site since 1952; operations = production of nursery pots of varying sizes.

3 underground non-vaulted nonwaste storage tanks; installed 1963-1975; 2 contain diesel feul, 1 contains unleaded gas ; capacity 300-10,000 gal
1 10,000 underground non-vaulted nonwaste storage tank containing Std. 250 thinner; installed 3/74

Chemicals on site: Std. 250 thinner, diesel feul, unleaded gas.

Facilities in area = Memorex, upgradient; Technical Coatings, downgradient.

Attachments: #1 - Site Location Map
#2 - Facility Map
#3 - Facility Questionnaire/UIC Program 6 pgs

B. Geology

Site stratigraphy consists mostly of silty clay, with sandy silt, and sand and gravel lenses; Deepest boring = 67 ft.

Soil classification per Risk Assessment Question # 11.

Attachments: #4 - Boring Logs 9 pgs

Hydrogeology

3 GW monitoring wells. 2 Aquifers sampled.
Shallow aquifer depth = 12-32 ft; Deep aquifer depth not defined.
Shallowest GW = 7.9 ft at MW-1B, Weiss Asso, 10/84.
GW flow direction = NE
GW gradient = not determined.

Attachments: #5 - Soil/Hydrogeology Information 4 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected: GW = 1 soil = 1 ("Thinner")

GW contamination from 1st MW, 5/84, analyzed by 2 labs (ppb):

Stoner Lab	=	5,200
Brown & Caldwell	=	9,000
Soil contamination, 18-19.5 ft,	=	16,700

RWQCB correspondence confirmed underground solvent thinner tank leaking.

GW analysis 10/84 = no detection of thinner in 2 wells installed by Weiss Asso.
Hydrocarbons from gasoline contamination detected at 38 ppb in deep well 1B.

Schematic of Weiss 2 wells with respect to 1st well not given.

Attachments: #6 - RWQCB Contamination Map
#7 - GW/Soil Data 5 pgs
#8 - RWQCB Correspondence re: Leak

D. Case Chronology

5/82	Facility Questionnaire completed
7/83	RWQCB Correspondence requiring Phase I investigation
9/83	1 GW monitoring well installed by Hallenbeck & Asso for Environmental Research Group, Inc.
3/84	Issuance of CAO considered by RWQCB
4/84	Phase I report by Weiss Asso received by RWQCB Findings - soil and GW contamination (10/83)
6/84	RWQCB correspondence re: solvent thinner tank leak; Phase II investigation required
7/84	Phase II proposal by Weiss Asso submitted
8/84	Facility plans removal of solvent tank RWQCB review of facility progress Issuance of CAO again considered
10/84	2 GW monitoring wells installed by Weiss Asso Schematic of 2 new wells not given GW analysis = no thinner; hydrocarbons detected
12/84	Resampling all 3 GW wells pending

E. Current Status

11/84	GW analysis showed hydrocarbons in 1B (deep well) from gasoline contamination
12/84	Facility to resample all 3 wells

Attachments: #9 - RWQCB Memo re: Status

F. References

No formal reports received.

Environmental Research Group, Inc. letter 11/17/83 (Attachment #7, pg 4).

1. **Hallenbeck & Asso letter re: well installation, 10/27/83.**
2. **Weiss Asso letter 11/3/83, received at RWQCB 4/18/84.**
3. **Weiss Asso Phase II proposal 7/10/84.**
4. **Facility Correspondence re: tank removal; review of RA Summary**
5. **RWQCB correspondence 6 pgs**

Micrel Wafer Fab, Inc
(formerly Advanced LSI)
639 North Pastoria Ave, SV

Site #: OG 75
File Name:Micrel

Facility: 1 Bldg
Date Reviewed: 7/84;5/85

Reviewer:LAP/LK

A. Description of Site

Micrel Wafer Fab (MWF) purchased plant (formerly named Advanced LSI Technology) from Siemens in 11/81.
Name changed to MWF 1/84.
Operations on site = semiconductor manufacturing since 1971.
Previous use of site not specified.

1 500 gal non-vaulted underground waste storage tank; installed 10/75; taken out of service 4/84
5 non-vaulted treatment tanks

Waste solvents are currently being drummed/disposed bimonthly by Solvent Service, SJ.

Chemicals used on site:
Siemens used TCA and TCE until 1977
Micrel has not used TCE or TCA as individual chemicals however proprietray chemicals used on site contain TCE and TCA.

Stored chemicals:
Acetone, IPA, n-Butyl acetate, Xylene, Freon

Phenol and TCB no longer used (per RA review 11/84).

Complete list of chemicals attached.

Attachments:	#1 - Site Location Map	
	#2 - Facility Map	
	#3 - Facility Queationnaire	9 pgs
	#4 - Chemicals OnSite	3 pgs

B. Geology

Site in subbasin characterized by thin bands of sand and gravel interspersed with clay and silt in alluvial stream and bay marine deposits; underlain by Santa Clara formation.

Soil classification per Risk Assessment Question #11.

Attachment: #5 - Boring Logs 4 pgs

Hydrogeology

2 GW monitoring wells to depth of 30.9 ft
2 aquifers in area: shallow = 10-30 ft; deep = not specified
Shallowest GW = 12 ft at MW-2
GW flow direction not given; assumed N-NW per Applied Tech DG
Gradient not given; data not given to calculate.

AquaScience Engineers 7/84 report for MWF notes 2 water wells within a mile of site.

Attachment: #6 - Hydrogeology Information 2 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions #1,2,3,4.

Total chemicals detected: GW = >10 soil = 4

Chemicals selected for soil and GW analysis were major solvents of proprietary chemicals - not all constituents.

Detection limits for TCA, TCE, DCM, Freon = 10 ppb
Detection limits for Methanol, Acetone, IPA = 10,000 ppb

Upgradient MW-2 (SW corner of property) clean (ND).

Contamination at MW-1, 5 ft DG from solvent tank (ppb):

	GW	soil
n-BA	610,000	9,000,000 at 16 ft
Xylene	250,000	14,000,000 "
Phenol	44,000	4,700 at 11 ft
1,2,4-TCB	1,500	800,000 "

AquaScience 7/84 report notes "indications are that either the tank or the pipe leading to it failed;...contamination in soil and GW originated on site."

GW analysis 12/84 MW-1 detected >10 chemicals.
These results used to recalculate scores for site for final 205j Report.

Attachments: #7 - RWQCB Soil/GW Contamination Maps 2 pgs
#8 - GW/Soil Data 5 pgs
#9 - AquaScience Leak Note

D. Case Chronology

9/13/82	Facility Questionnaire completed
7/9/84	Phase I Investigation by AquaScience Engineers Findings - soil/GW contamination
12/84	GW resampled in MW-1 Findings - more contaminants detected; higher conc

E. Current Status

3/85 OnGoing Phase II lateral and vertical investigation required

Attachment: #10 - RWQCB/Facility Correspondence 9 pgs

F. References

1. AquaScience Engineers report 7/84
2. Facility response to RA Summary

Hewlett-Packard Company
333 Logue Ave, Mt View

Site #: OG 76
File Name:HPMtV

Facility: 3 Bldgs
Date Reviewed: 4/85

Reviewer:LK

A. Description of Site

No information re: previous use of site.
Length of occupancy not specified; tank inoperation on site 1967
Operations on site not specified; Bldg 30 = Instrument Support Division; Bldg 31 and 32 = Corporate Parts Center.

1 500 gal underground waste storage tank; installed 1967; out of service 1978; filled with concrete 8/80
1 1000 gal underground fuel tank; installed 1971

Chemicals on site: Not Specified.
7/82 analysis of tank contents showed 1,1,1-TCA, Acetone, Toluene, n-Butyl acetate, Isopropanol (IPA), Perchloroethylene (PCE), Freon-TF (Freon-113).

Other facilities in Mountain View area include Fairchild, Intel, NEC, Siltec, Raytheon.

Attachments:	#1 - Site Location Map	2 pgs
	#2 - Facility Map	
	#3 - Facility Questionnaire	6 pgs
	#4 - Facility Information	7 pgs

B. Geology

Geologic materials consist of damp to moist interbeds of clay and sandy clay, clayey/silty sands, and gravel beds.
Deepest boring on site = 78.5 ft, AEC-2B.

Soil Classification per Risk Assessment Question # 11.

Attachments:	#5 - Geologic Cross Section/Info	3 pgs
	#6 - Boring Logs	17 pgs

Hydrogeology

6 GW monitoring wells (4-A, 2-B) 2 aquifers sampled

A aquifer = ~ 23-53 ft B aquifer = ~ 60-70 ft
Shallowest GW = 21 ft, AEC-1, 5/83
GW flow direction = NE
GW gradient = .004 ft/ft

Natural drainage of the project site is by sheet flow to NE to Guadalupe Slough, then to bay.

Attachment: #7 - Hydrogeologic Information 4 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions #1,2,3,4.

Total chemicals detected: GW = 7 soil = 4

GW contamination not well documented. Completed Priority Pollutant scans for all 4 wells not done so total number of chemicals in GW may be >7.

Freon stored on site and detected in abandoned tank contents at 64,000 ppb, 7/12/82. Not analyzed in 7/83 GW sample.

Wells AEC-2A, AEC-2B, abd AEC-3 only analyzed for TCE and PCE. Acetone was stored on site and detected in soil at AEC-2.

GW sample 7/84 labelled "P.L." not identified. 3 contaminants present.

A aquifer contamination, highest concentrations (ppb):

PCE	1030	AEC-1	7/83
1,1,1-TCA	58.6	"	"
1,1,2-TCA	21	"	7/84
TCE	16.2	AEC-4A	4/84
Chloroform	13.9	P.L.	7/84
Vinyl chloride	12.8	AEC-1	8/83
Trans-1,2-DCE	3.3	AEC-4	6/84

B aquifer tested for TCE, PCE, Acetone and not detected.

Soil contamination, highest concentration (ppb):

Acetone	3200	AEC-2	77.5-78 ft	1/84
PCE	250	AEC-4	25- 25.5 ft	4/84
TCE	10	AEC-1	10 ft	7/83
Toluene	10	AEC-1	20-20.5 ft	7/83

Applied Earth Consultants 7/31/84 report states "Modelling..shows that VOCs detected in GW in AEC-4 could have migrated from location of solvent storage tank since 1967 - year tank put into operation." (Attachment #7 pg 3,4)

Attachments: #8 - GW Data 11 pgs
#9 - Soil Data 19 pgs
#10 - RWQCB Contamination Map

D. Case Chronology

10/82	RWQCB memo re: HP need to investigate all sites with undergroun tanks
1/83	HP correspondence re: corporate management of tanks
2/83	Facility Questionnaire completed
5/83	RWQCB letter repeating need for subsurface investigation at 333 Logue
8/83	Phase I subsurface investigation by Applied Earth, Inc Findings - GW/soil contamination
10/83	RWQCB letter requesting further identification of contamination
7/84	Phase II report by Applied Earth Consultants Findings - 5 additional wells installed but contamination not well defined

Attachments: #11 - RWQCB/HP Correspondence 13 pgs

E. Current Status

4/85 OnGoing case to define contamination on site

F. References

1. Correspondences (as above)
2. Applied Earth Consultants, Inc. reports 8/83, 7/84.

Timex Corporation Site #: OG 83
20650 Valley Green Dr, Cupertino 95014 File Name:Timex

Facility: no site map given
Date Reviewed: 7/84;3/85 Reviewer: LK

A. Description of Site

No info re: length of occupancy; operations on site; previous use of site.

1 600 gal underground non-vaulted waste storage tank, installed 1978
2 underground vaulted water neutralization tanks, installed 1978.

Chemicals stored: Hexanes, IPA, Ethanol, Methanol, Benzene, Toluene, Acetone; Na Hydroxide, K Hydroxide, HCl acid, Sulfuric acid.

No site location map; no facility map. Plot map of underground tanks attached to Facility Questionnaire.

Attachment: #1 - Facility Questionnaire, 7 pgs.

B. Geology

No formal hydrogeological investigation done.
Shallow soil samples only - 2,3,4 ft deep.

Soil Classification for Risk Assessment Question # 11 unable to complete.

Attachment: #2 - Soil Information/Map, 2 pgs.

Hydrogeology

Groundwater (GW) in Cupertino at 80-90 ft. per Santa Clara Water District records.

Attachment: #3 - GW Information

C. Contamination

See Risk Assessment Chemical Properties Questions #1,2,3,4.

Total chemicals: GW = not analyzed soil = >10

All 7 chemicals on site detected in >10 soil contaminants.
Direction/scale not given on drawings. Sample ID #s change.

Major contamination at location # 11419, 2 ft deep; near main hole, done by Stoner Lab 12/22/83 (ppb):
Hexanes 110,000 Benzene 80,000 Toluene 29,000
Methanol 13,000 Ethanol 83,000 IPA 47,000
Acetone 430,000 Chloroform 100,000
Dichloromethane 48,000

1/9/84 Soil analysis by EAL showed low detection Toluene, Benzene, Chloroform and major detection of:
2,2-Oxybisethanol 3300 1,1-Oxybisoctane 16,000 at # 11418
" 3400 " 7,000 at # 11416.
Site # 11418 not located on drawing.

1/27/84 Tank excavation completed.
Soil samples from undisturbed soil showed (ppb)
2,2-Oxybisethanol 1180 at #11 13,000 at # 12
1,1-Oxybisoctane 6,400 at #13.
Different ID # for these samples; depth not specified.

Visual inspection of tank and lines detected no leaks. Discharge presumed due to overfilling tank; solvents seeped from between dip tube and concrete slab.

Attachments: #4 - RWQCB Soil Contamination Plume Maps, 2 pgs
#5 - Soil Data, Stoner Lab, 12/83
#6 - Soil Data, EAL Lab, 1/84 6 pgs
#7 - Soil Data, EAL Lab, 2/84 5 pgs
#8 - Source of Contamination Letter, 2 pgs

D. Case Chronology

11/3/83	Safety Specialists submitted proposal to Timex for site closure.
11/11/83	Facility Questionnaire completed for Leak Detection Program
12/22/83	Initial Soil Analysis by Stoner Lab Findings - >10 chemical contaminants GW not analyzed
1/27/84	Excavation of waste solvent tank.

E. Current Status

6/84	RWQCB requested soil sampling proposal to determine lateral and verticle extent of soil contamination. Requested facility info re: Diethylene glycol (2,2- Oxybisethanol) on site.
3/85	Facility investigation "OnGoing" (verbal communication) but no new information by RWQCB or Timex

Attachment: #9 - RWQCB Correspondence re: Status, 2 pgs

F. References

1. Safety Specialists, Inc. Correspondence to RWQCB, 2/13/84.
2. Facility Questionnaire (Attachment #1).

Lorentz Barrel & Drum Co., Inc.
1515 S. 10th St., SJ 95112

Site #: OG 84
File Name:Lorentz

Facility: 4 Bldgs
Date Reviewed: 12/84

Reviewer: LAP/LK

A. Description of Site

No info re: previous use of site.

Operations on site began 1946 and consist of collecting barrels/drums from various users, and reconditioning for sale; 150,000 drums reconditioned annually (60,000 stored 8/83).
Two types of drums processed at facility = open ended, which are burned in incinerator, and closed, which are flushed with water/steam; drums are then sandblasted, straightened, coated, and placed in warehouse for resale.
Most of 5.4 acre facility used for unreconditioned drum storage.

1 underground non-vaulted non-waste storage tank;
3 underground sumps;
capacity, installation dates not given.

Chemicals used on site: not given

Facility located downgradient of Burke Industries and US Cellulose, both NA status.

Attachments:		
	#1 - Site Location Map	
	#2 - Facility Map	2 pgs
	#3 - Facility Questionnaire	4 pgs
	#4 - Facility Information	2 pgs

B. Geology

Sediments on site characterized by silty clay, sandy silt, sand and gravel, and clay.
Soil samples taken 10/82 West of processing plant noted highly compacted crushed rock fragments that appeared to be serpentinite, based on green coloration.

Soil classification per Risk Assessment Question # 11.

Attachments:		
	#5 - Boring Logs	3 pgs
	#6 - Soil Information	2 pgs

Hydrogeology

3 GW monitoring wells (MW). 1 aquifer sampled.
Shallowest GW = 18 ft at MW 1 and 3
GW flow direction = NW per 7/84 report
GW gradient in shallow zone = .0021 ft/ft (.21%)
Horizontal velocity = 2 to .0002 ft/yr

SCVWD water wells located around facility; well depth = 470-803 ft (location on Attachment # 1);
Well 7S1E16C06 one of 9 clustered wells used in Risk Assessment ranking.

Facility horizontally located within 5000 ft of pressure zone delineated by SCVWD.

Attachments: #7 - Hydrogeology Information 3 pgs
#8 - SCVWD 8 Water Wells Information 11 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions #1,2,3,4.

Total chemicals detected: GW = > 10 soil = > 10

Major soil and GW contamination found along drainage ditch on site.
MW-3, adjacent to drainage ditch, shows GW concentration increasing (ppb):

	1/84	3/84
TCE	640	1000
Trans-1,2-DCE	ND	105
1,1-DCE	29	47
Freon 113	ND	41
PCE	17	38
TCA	26	34

MW-2, West of plant in serpentinite rock area,
only 3 chemicals detected at very low concentrations ppb:
TCA, Chloroform, Freon 113.

Metals detected in low concentrations at MW 1 and 2; Pesticide Aroclor 1260 detected at MW 3.

Soil contamination of Purgeable Priority Pollutants highest near MW-1; Major contaminants, 10 ft depth, ppb =

Trans-1,2-DCE	700
TCE	410
PCE	160

Initial soil investigation on site 10/82 = composite, scraped surface samples, subsurface (12-15 inches) samples, and wet extractions. Analyses performed for 34 elemental metals, 6 organic solvents, and 34 distinct chlorinated hydrocarbons, pesticides and PCB's.
Major contaminants = Lead and Aroclor 1260 at sites # 12 and 6, (site of MW-3), and Lead in the wet extraction.

Soil excavation along drainage ditch 11/83 for contaminants PCB, Chlordane, DDD, and DDE.
Soil sample following excavation 11/83 =

Aroclor 1260	170
Chlordane	160

not specified whether ppm/ppb units

Additional soil excavation 1/84; sampling after excavation =

TCE	120 ppb
PCE	80 ppb
Aroclor 1260	350 ppb

Attachments:		
	#9 - RWQCB Plume Map	
	#10 - GW 3/84 Data	2 pgs
	#11 - GW/Soil 11/83 and 1/84 Data	5 pgs
	#12 - Soil Map/Data 10/82 Investigation	4 pgs
	#13 - Soil Drainage Ditch Information	5 pgs
	#14 - Soil Data Following Excavation	6 pgs

D. Case Chronology

8/81	DOHS collected soil samples on site
3/82	DOHS Notice of Violation to mitigate hazardous conditions on site
6/82	Facility Questionnaire completed for Leak Detection Program
9/82	DOHS repeated soil sampling on site Findings - heavy metals, pesticide contamination
5/83	Dept of Fish/Game site investigation notes violations
8/83	CAO issued
10/83	Soil investigation to determine extent of excavation along drainage ditch
11/83	RWQCB letter re: CAO progress 2 MWs installed initial soil excavation along drainage ditch
1/84	3rd MW installed
2/84	2 abandoned concrete sumps to be backfilled drainage ditch to be backfilled with clean soil
3/84	GW analysis shows increasing concentration at MW-3
9/84	RWQCB requires 4th MW to define GW contamination DOHS monitoring soil contamination
11/84	City of San Jose, Dept of Water Pollution Control, site investigation finds violations on site.

E. Current Status

9/84	RWQCB requires 4th MW to define extent of contamination
11/84	Site investigation by SJ Dept of Water Pollution Control finds violations
12/84	Clean-up investigation transferred to Conservtech following death of Don Feuerstein of Feuerstein Asso; 30 day extension given by RWQCB.

Attachments: #15 - RWQCB/DOHS Correspondence re: Status 4 pgs
#16 - SJ DWPC Site Investigation 2 pgs
#17 - Conservtech Correspondence

F. References

1. Feuerstein Asso reports 7/83, 8/24/83, 2/29/84.
2. Feuerstein Case Chronology 7/84 6 pgs
3. DOHS Notice of Violation 3/5/82 4 pgs
4. Dept of Fish/Game Investigation Report 3 pgs
5. CAO 8/3/83 9 pgs
6. Hazardous Waste Disposal Permit 11/83 3 pgs

APPLIED MATERIALS Site #: OG 85
3050 Bowers Avenue File Name: B:Applied
Santa Clara, CA 95051

Facilities: 3050 Bowers Ave.* *Facilities which have
2727 Augustine Dr.* underground tanks
3001 Oakmead Village Ct.
3400 Central Expressway
2950 Kifer Road

Date Reviewed: 9/28/84 Reviewer: MCT

A. Description of Site

Manufacturer of semiconductor equipment. No information on length of occupancy or previous use in file.

3050 Bowers tanks:
- 1 734 gal non-vaulted solvent waste tank
- 2 1077 gal non-vaulted acid neutralization tanks
- 1 120 gal acid neutralization system final sump

Solvent waste tank never used for any purpose; acid neutralization tanks have been taken out of service and are scheduled for removal (c).

2727 Augustine Dr. tanks:
Tank at well site AM7 has been removed; tank at well site AM8 has been double contained in accordance with Santa Clara city ordinance 1490 (c).

No information on chemicals used on site in file.

Attachments: #1 Site Map
#2 Facilities Questionnaire

B. Geology

Upper layer of silty clay to ~15 ft. underlain with sand and gravel to ~24 ft. - silty clay underneath.

Test results from 18 Monitoring Wells (MW) but boring logs in file for only 3 (MWs #1,7.8,5B); deepest boring ~53.5 ft. These 4 MWs are located directly downgradient of tanks.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs
#4 Geologic Cross Sections

Hydrogeology

One aquifer layer defined. Shallowest groundwater (GW) at ~7 ft (1). GW gradient ~0.7%, direction of flow to northeast across site based on draft GW elevation map (Attachment #5).

Test results from 18 MWs but only 3 boring logs in file:

- 5 MWs on Bowers Ave. property but boring log for only 1,
- 2 MWs on Augustine Dr. facility,
- 7 MWs results from Hewlett Packard wells at property downgradient (DG).
- 4 MWs results from Avantek wells at site DG.

Attachments: #5 GW elevation map

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: no information on chemicals used on site in file.

Soil contamination: No Detection at AM-7 (Augustine Drive site), 7 chemicals detected at Bowers Ave. site - major contaminants:

TCA	57 ppm
1,1-DCA	4.1 ppm

GW contamination (Bowers Ave) - 10 chemicals. Major contaminants:

TCA	14,000 ppb
1,1-DCE	3,400 ppb

GW contamination (Augustine Dr.) - 2 chemicals (MW #AM-8 only):

Freon	430 ppb
1,1-DCA	7.2 ppb

No mention of possible source in file.

Consultants argue that decreasing TCA concentration from Hewlett Packard to Applied Materials "suggests" TCA from Applied Materials is not migrating onto Hewlett Packard property (3).

No lab analysis in file for testing subsequent to Phase I studies - only summary sheet of results supplied by Applied Materials.

Attachments: #6 Phase I Lab Results 12/83
#7 Lab Results Summary 8/84
#8 Soil Analysis results 2/85
#9 GW Analysis results 4/85
#10 RWQCB Plume Maps

D. Case Chronology

Investigation initiated voluntarily by Applied Materials.

1/18/84	Phase I subsurface investigation by Weiss Associates recieved by RWQCB. 3 borings/MWs constructed. Findings: Many contaminants in GW at Bowers Ave. site, no soil testing; Limited GW contamination at Augustine Dr. site, no soil contamination detected but boring tested not the same as one which showed GW contamination.
3/15/84	Phase II proposal by Weiss Associates recieved by RWQCB
4/24/84	RWQCB accepts Phase II proposal with qualifications.
8/23/84	Additional lab results summary on new MWs received by

	RWQCB - no boring logs or original lab analysis included with results.
10/11/84	RWQCB receives proposal for remedial action plan by Applied Materials.
1/3/85	Weiss Associates letter received by JYL includes GW analysis for "B" aquifer well (AM-2). Results: no detection for TCA, TCE (Attachment #13).
2/4/85	Soil analysis results submitted by Weiss Associates show soil contamination for Bowers Ave site (Attachment #8).
4/29/85	GW analysis results submitted by Weiss Associates shows TCA contamination in "B" aquifer well (AMI-5B) (see Attachment #9).
5/21/85	Boring log for AMI-5B and geologic cross-sections for Bowers Ave site submitted by Weiss Associates.

Attachments: #11 RWQCB letter 4/24/84
#12 Applied Materials letter 10/10/84
#13 Weiss Associates letter 12/21/84

E. Current Status (as of 5/28/85)

Ongoing Phase II.

F. References

1. Weiss Associates Phase I report 1/84
2. Applied Materials lab results summary 8/84
3. Weiss Associates "Phase III" proposal 9/84

AMPEX CORPORATION
728 San Aleso
Sunnyvale, CA 94086

Site #: OG 86
File Name: B:AMPEX

Facility: 1 building

Date Reviewed: 9/12/84

Reviewer: MCT

A. Description of Site

Built in 1968, 1968-73 used as machine shop. One acre property.

'73-'83 Site used as small electroless nickel plating facility for computer disks.

2 Underground tanks (2,500 and 3,000 gal) containing:

- Cyanide
- Liquid Nickel
- Zinc
- Cobalt (1)

No Facilities Questionnaire has been completed by Ampex.

Attachments:
- #1 Site Location Map
- #2 Site Location Map
- #3 Site Map

B. Geology

Typical soil stratigraphy 10-15 ft. of black silty clay underlain by gray brown to brown silts with interbedded sand and gravel lenses.

13 Borings; deepest boring 27 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Logs

Hydrogeology

4 Monitoring Wells (MW), 2 upgradient and 2 downgradient from tanks; deepest MW 27 ft.

Only one aquifer layer defined. Shallowest groundwater (GW) ~7 ft., GW moves North.

GW gradient calculated by MCT to vary between ~0.7-1.5 % in the vicinity of the underground tanks based on GW elevation data (see Attachment #5). No information on GW velocity in file.

Attachments: #5 GW elevations

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: Organic solvents found in GW analysis but not used in plant (Attachment #6).

Soil contamination - 2 chemicals (soil tested for TCA and TCE only). Results:

	8/83	11/83
TCE	530 ppb	<10 ppb
TCA	180 ppb	34 ppb

Soil samples taken at a depth of ~3 feet.

GW contamination - 8 chemicals. Major contaminants:

TCE	3,800 ppb
TCA	2,400 ppb
1,1-DCE	1,900 ppb

Highest GW contamination downgradient of tank system (see Attachment #12). Woodward-Clyde results differ by as much as a factor of six between analytical labs (see Attachments #10 & 11). Woodward-Clyde contends that highest levels of contamination limited to GW based on soil analyses conducted 8/83 and 11/83 (see Attachments #8 & 9).

RWQCB plume not well defined (Attachment #12).

Attachments:	#6	Ampex letter 6/24/83
	#7	GW analysis 6/83
	#8	Soil analysis 8/83
	#9	" " 11/83
	#10	GW analysis 4/84 (Scientific Env. Labs)
	#11	" " 4/84 (Brown & Caldwell)
	#12	RWQCB plume map attempt

D. Case Chronology

Study initiated by Ampex to assess possible GW contamination on site.

6/83 Phase I subsurface investigation by J.H. Kleinfelder completed. Findings: GW contamination (no soil testing).

8/31/83 J.H. Kleinfelder supplemental report completed. Findings: Soil analysis for TCA and TCE only. Soil contamination present, but at lower levels than in GW.

11/83 Woodward-Clyde report on soil analysis. Findings: Soil contamination levels lower than for 8/83 Kleinfelder report (see Attachment #9 for location of borings and lab results).

5/23/84 Phase II report by Woodward-Clyde Consultants received by RWQCB. Findings: GW contamination about the same as in earlier investigation.

8/17/84 Remedial Action Plan by Geomatrix received by RWQCB includes provisions for additional investigation to determine extent and possible source of contamination.

E. Current Status (as of 11/14/84)

The action plan has been carried out. Ampex will start building an off-site monitoring well in a week. This program will define the contaminant plume. JYL is supervising this program. (c)

F. References

1. J.H. Kleinfelder & Associates Phase I report 6/83
2. J.H. Kleinfelder - 8/83 supplemental report
3. Woodward-Clyde Consultants Soil Analysis 11/83
4. Woodward-Clyde Consultants Phase II report 5/84

HEWLETT PACKARD Site #: OG 87
974 East Arques Ave, Sunnyvale File Name: B:HPSV

Reviewed 4/84;1/17/85 Reviewer:LAP/ MCT

A. Description of Site

This site houses the Personal Office Computer Division and manufactures electronic components and equipment. Facility was purchased from Fairchild in 1972 (2). No information on operations of previous occupant in file.

Facility maintains 9 non-waste tanks (4 vaulted, 5 non-vaulted) containing gasoline or diesel. It has also maintained 8 waste storage tanks:

1 Paint booth liquid waste tank containing less than 1% solvents. This tank's use was completely terminated 5/83 (c)
1 Brite Dip waste tank containing 6% NaOH proprietary solution and 4% sulfuric acid. Tank use terminated.
1 Alodine waste tank containing 1% chromic acid. Tank use terminated.
3 Waste acid tanks containing cupric chloride (23% HCl, 94,000 ppm Cu, and 76.9% water). Tanks were used only for floor spills, terminated 12/83 (c).
1 Solvent tank used for floor spills only. Emergency use only.
1 Waste oil tank containing automotive oil.

Site also maintains two concrete sumps. For more detailed information, see Attachment #2.

Chemicals used in the paint booth (2):

Methyl Ethyl Ketone	Toluene
Methyl Isobutyl Ketone	Xylene
Butyl Cellosolve	n-Butyl Ketone
Butyl Carbital	Ethyl Benzene
Aliphatics and aromatics	n-Butyl Acetate

Attachments: #1 Site Maps
#2 Facilities Questionnaire

B. Geology

Sediments consist of generally sandy/silty clays from 0-8 ft., with sands and gravels from 8-15 ft. and a clay layer from 15-18 ft. (2).

3 Borings; deepest 18 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs

Hydrogeology

One aquifer layer defined. Shallowest groundwater (GW) 9.38 ft.(2). Only 1 monitoring well (MW) so little information on GW flow direction or gradient. Regional GW flow North.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: No chemicals detected in GW reportedly used on site. "Distribution of non-volatile organics in the soil column suggests that the tank has leaked some wastewater to the subsurface" (2), but no phenols or non-volatile organics detected in GW.

GW contamination - 5 chemicals. Major contaminants:

1,2-DCE	1,100 ppb
TCA	430 ppb

It has been suggested that GW VOC contamination has come from an off site source (2).

Soil contamination - 4 chemicals. Major contaminants:

Di-n-butyl Pthalate	4,400 ppb
Phenol	90 ppb

Only one VOC detected in soil (1,2-DCE at 70 ppb) but detection limit for VOCs relatively high (20 ppb). Detection limits for non-volatiles on EPA 625 soil scan ranged from 4.8 to 110 ppb (3).

Nearby facilities: MMI, UTC, NSC (see Attachment #1)

Attachments: #4 Lab Results 1/84
#5 Lab Results 10/84

D. Case Chronology

Leak Detection Program 1982

6/3/82	Facilities Questionnaire received by RWQCB
6/22/82	Letter from City of Sunnyvale to HP. Discussion of revision of chemical storage tank facilities.
6/30/83	HP letter informs RWQCB that tank collecting wash water from paint booths appears to be leaking (see Attachment #6).
11/9/83	Results of soil analysis by Levine-Fricke Engineering Consultants for HP. 3 borings adjacent to waste acid tank; deepest 11 ft. Results: Consultants suggest no significant leakage of acid waste into soils based on pH measurements. No analysis for VOC's performed.
1/10/84	Subsurface investigation by Levine-Fricke completed. 1 boring/MW constructed (to 18 ft.). Results: Soil and GW contamination detected.
3/8/84	RWQCB letter requiring additional investigation (see Attachment #7).

5/11/84	Letter to JYL from HP received asking permission to fill and cap 3 underground vaults (Paint booth waste, Brite Dip waste, & Alodine waste tanks) located on west side of building. Letter states that tanks have not been used since Sept. 1982.
6/21/84	HP letter received by RWQCB with tank integrity test results for above 3 tanks and request for approval of earlier closure plan.
7/31/84	Letter from HP received by JYL includes information on constituents of paints and thinners used in paint booths.
8/24/84	RWQCB approves closure plan for 2 of 3 underground vaults. The closure plan for the paint booth waste tank was disapproved pending further investigation to determine the extent of soil and GW contamination.
10/9/84	Soil analysis for paint booth waste tank area received by RWQCB. Results: Di-n-butyl Pthalate only chemical detected above detection limits on EPA 625 scan for non-volatiles.
11/26/84	Judy Fulton of HP reviews and comments on 205j Summary File (see Attachment #9).

Attachments: #6 HP letter 6/30/83
#7 RWQCB letter 3/8/84
#8 RWQCB letter 8/24/84
#9 205j Summary File Review 11/26/84

E. Current Status (as of 1/85)

Ongoing investigation.

F. References

1. Soil Analysis at Acid Waste Tank by Levine-Fricke 11/83
2. Phase I subsurface investigation by Levine-Fricke 1/84
3. Soil Analysis by Analytical Technologies, Inc. 9/84

MAGNETIC PERIPHERALS, INC.
3333 Scott Blvd.
Santa Clara, CA 95051

Site #: OG 88
File Name: MagPer

Date Reviewed: 9/28/84

Reviewer: MCT

A. Description of Site

The site was vacant until 1978 when Sperry Univac erected the building, which was occupied in August 1979. The building was used for assembly of disc drives and controllers. (c)

In April 1983, Magnetic Peripherals, Inc. (MPI), a division of Control Data Corporation, acquired the site, builidng and assembly operations from Sperry Univac. The building continues to be used for the assembly of disc drives and controllers. (c)

Site has aboveground diked storage tank areas for new chemicals and waste chemicals. Site has buried diesel fuel tanks. Facilities Questionnaire was submitted in 1982 by Sperry Univac for 3333 Scott Blvd. site (c) but not found in files.

Freon TMS only chemical cited in any reports as definitely being used on site (c).

See Attachment #6 for site location.

Attachments: #1 Site Map

B. Geology

Subsurface soil interlayered fine sands and silty clays.

9 Borings; deepest 40 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #2 Boring Logs

Hydrogeology

One aquifer layer defined. Shallowest groundwater (GW) ~3 ft., GW flow NE (1). GW gradient in vacinity of subsurface Freon TMS pipeline estimated by MCT to be ~0.2%. No information on GW velocity in file.

9 Monitoring Wells (MW); deepest 36 ft.

Attachments: #3 GW levels

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: High Freon 113 (a component of Freon TMS) (8,000 ppb) in GW in vicinity of subsurface pipeline formerly used to transport Freon TMS.

Soil contamination - 2 chemicals:

Xylene	43 ppb
Ethylbenzene	4 ppb

Soil tests only from MW-2 and MW-5 - soil contamination in MW-2 only.

GW contamination - 10 chemicals. Major contaminants:

Freon	8,000 ppb
TCE	180 ppb

Attachments: #4 Emcon Lab Results 1/10/84
#5 Aqua Resources Lab Results 4/6/84
#6 RWQCB Plume Maps

D. Case Chronology

Leak Detection Program 1982

11/16/83	Emcon proposal for Phase I study received by RWQCB.
1/13/84	Phase I subsurface investigation by Emcon completed. 5 Borings/MWs constructed. Findings: Soil & GW contamination.
2/17/84	Report of pressure testing of underground pipes and tanks and proposal for additional studies received by RWQCB. Findings: No leakage except for chemical shed drain line, which is only used to capture accidental spillage.
5/9/84	Phase II subsurface investigation by Aqua Resources recieved by RWQCB. 4 additional borings/MWs constructed. Findings: essentially same contamination levels as Emcon report on pre-existing MWs - new MWs showed N/C except for 1 ppb Freon at MW-#8.
8/22/84	Improved aboveground secondary containment with 3" curb was installed at the chemical shed. The previous chemical shed drain line connecting the chemical shed to the underground spill containment vessel was disconnected and plugged. (c)
9/27/84	As an additional precaution, a new aboveground Freon TMS pipe system was installed to replace the underground pipes even though the original pipes proved sound in a pressure test. The underground pipes were disconnected, purged and capped off. (c)

E. Current Status (as of 6/24/84)

Ongoing Phase II (JYL)

F. References

1. Emcon Associates Phase I report 1/84
2. Aqua Resources, Inc. Phase II report 5/84

AVANTEK, INC.
3175 Bowers Avenue
Santa Clara, CA

Site #: OG 90
File Name: B:AVANTEK

Facility: 3 buildings

Date Reviewed: 9/12/84

Reviewer: MCT

A. Description of Site

No information on current operations, length of occupancy, prior occupants or use in file.

Site has 3 non-vaulted waste solvent storage tanks and 3 non-vaulted acid neutralization tanks. No information on specific contents of tanks in file.

Attachments: #1 Site Map
#2 Facilities Questionnaire

B. Geology

Subsurface soil consists of interlayered clay, silt, and sand deposits.

6 Borings; borings 14.5-41.5 ft. deep depending on where GW discovered.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs (5 sets)

Hydrogeology

6 Monitoring Wells (MW); deepest well 41.5 ft.

Only one aquifer defined - depth range varies between 25.5-37 ft (MW #1) and 3.5-14 ft. (MWs #2-5). GW stabilized between 6 and 11 ft.

GW flows North. No information on GW gradient or velocity in file.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

Soil contamination - no contamination but relatively high detection limits, ranging from 10 ug/kg for TCE & TCA to 500 ug/kg for Methyl Ethyl Ketone.

GW contamination - 10+ chemicals. Major contaminants:

Xylenes	86,000 ppb
1,1,1-TCA	38,000 "
Ethyl Benzene	24,000 "

Two suspected sources were tentatively identified by Safety Specialist, Inc. (the underground pipes and above ground solvent tank area, both of building #2 - see Attachment #1 for location).

RWQCB plume maps do not clearly define plume at Avantek (Attachment #7). RWQCB plume maps of area show common contamination at nearby sites (Attachment #8).

The newest round of sampling (Acurex job #14141-001) at well #6 shows much higher levels of contamination than previously reported (Attachment #6).

Attachments: #4 Lab Results 12/83
#5 " " 7/84
#6 " " 11/84
#7 Tentative source identification
#8 RWQCB plume maps (Avantek)
#9 " " " (area)

E. Case Chronology

1/10/84	Phase I subsurface investigation by Emcon Associates completed. Findings: GW contamination but no soil contamination detected (detection limits for soil relatively high).
2/17/84	Facilities Questionnaire completed.
3/13/84	Safety Specialists, Inc. letter to Avantek tentatively identifies suspected sources of contamination.
3/15/84	Revised Facilities Questionnaire completed.
7/13/84	Safety Specialists, Inc. report new lab results from MW #4 with results consistent with earlier investigation. (Attachment #5)
7/22/84	RWQCB approves Phase II proposal (Attachment #9).

Attachments: #10 RWQCB letter 7/22/84

E. Current Status (as of 9/12/84)

Waiting for Phase II report.

F. References

Emcon Associates (1/84) report
Misc. correspondence

AYDIN ENERGY SYSTEMS Site #: OG 97
3180 Hanover Street, Palo Alto File Name: Aydin

Reviewed 6/84;3/85 Reviewer:LAP/ MCT

A. Description of Site

"The site has been used for over twenty years for the production of transformers and other electrical power equipment" (5). No information on former occupants or use in file.

3 non-vaulted, steel waste storage tanks approximately 3,000-4,000 gal. each onsite (Attachment #2). Tanks were used for storage of transformer oil with a naphthenic base (Shell Diala AX oil) from 1961-71 (5). Bottom of tanks is about 9 ft. below grade (2). Following chemicals detected in tanks (Attachment #3):

- Acetone
- Freon 113
- Toluene
- PCBs (Aroclor 1254, 1260)
- Isopropanol
- 1,1,1-Trichloroethane
- Petroleum Oil

Hewlett-Packard took possession of site 7/26/84 and plans construction of new buildings onsite by summer 1985 (Attachment #11). Because of these plans, Hewlett-Packard has presented an alternative to Aydin's proposal for subsurface investigation and remedial action (even though responsibility for GW investigation is Aydin's) in order to speed up the process of investigation and cleanup.

Attachments: #1 Site Maps
#2 Facilities Questionnaire
#3 Tank Content Analysis

B. Geology

Subsurface soils consist mainly of silty clays.

7 borings; deepest 11 ft. Borings 5-7 were completed at a 25 degree angle from vertical.

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Logs

Hydrogeology

Very little hydrogeologic data available since no monitoring wells constructed onsite. Depth to groundwater (GW) about 20 ft. based on studies of nearby sites (Attachment #9).

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: Aroclor 1254 & 1260, 1,1,1-TCA, and Petroleum Oil detected in soil. No GW analysis performed.

Soil contamination - 10+ chemicals. Major contaminants:

C-3 Benzenes	8.9 ppm
Aroclor 1260	7.7 ppm

GW contamination - no GW analysis performed.

There are two areas of concern for monitoring on site:

1. 3 Underground tanks containing hazardous materials including petroleum products and PCBs.
2. A 175 ft. trench used for collecting spills at the facility (Attachment #9).

PCB-contaminated soils onsite were removed in 1982, resulting in an excavation 10 ft. x 200 ft. x 2 ft. deep. The highest concentrations of PCB and Trichlorobenzene have accumulated in the vicinity of the western portion of the excavated trench (Boring B-3). The lateral and vertical extent to which levels of the contaminants decrease to less than the CAM criteria of 50 ppm deemed acceptable by the CAM in the western portion of the trench is unknown (4).

"During recent inspections of the site, barrels of oils and solvent (1,1,1-TCA) were observed along the western edge of the concrete pad south of the above-ground storage tank. Soil along the edge of this pad was also observed to be visibly stained. No soil sampling has been conducted in this area." (5)

Although tank residuals were reportedly removed and properly disposed of in October 1982, the integrity of the tanks during the period of their use is unknown (5). The impact that PCBs or Trichlorobenzene may have had on the groundwater is not known (4).

Attachments: #5 Surface Soil Sampling 11/82
#6 Soil Analysis 2/84
#7 Soil Analysis 9/84
#8 Contaminant Isoline Maps (of trench area)

D. Case Chronology

Leak Detection Program 1982

5/28/82 Facilities Questionnaire completed.

11/2/82 Aydin letter to DOHS with surface soil sampling results from trench area. Findings: PCB contamination in soils.

9/19/83 Aydin letter to DOHS with proposal for pressure testing tanks.

10/4/83 RWQCB letter with options to Aydin for determining tank competence.

10/24/83 DOHS letter with additional requirements for soil sampling because of RWQCB basing requirements for monitoring well construction on results of soil analysis.

11/3/83 RWQCB receives letter from Aydin agreeing to test soils

	with additional requirements.
2/1/84	Phase I report "Soil Environmental Investigation" by J.H. Kleinfelder & Associates completed. 3 borings constructed at a 25 degree angle from vertical to test soils underneath tanks. Findings: soil contamination.
3/29/84	SCH memo comments on case from 9/83 to 3/84 (Attachment # 9).
3/30/84	DOHS acknowledges receipt of Phase I report.
4/13/84	RWQCB receives HP cover letter and Levine•Fricke surface soil sampling results. Findings: Methylene Chloride, PCE detected in addition to PCBs.
5/10/84	RWQCB letter requires GW sampling.
5/18/84	DOHS letter to HP discusses HP's concern over responsibility for soil and GW contamination on site.
7/25/84	RWQCB letter with clarification of requirements for GW sampling (Attachment #10).
9/12/84	Phase II Geotechnical Investigation report and Phase III proposal by J.H. Kleinfelder & Associates completed. 4 borings in trench area constucted. Findings: soil contamination.
11/1/84	RWQCB comments on Phase II report and Phase III proposal.
12/3/84	SCH memo summarizes meeting with HP and Levine•Fricke about Phase III proposal (Attachment #11).
1/16/85	DOHS letter of qualified acceptance of Levine•Fricke proposal with additional requirements.

Attachments: #9 SCH memo 3/29/84
#10 RWQCB letter 7/25/84
#11 SCH memo 12/3/84

E. Current Status (as of 3/5/85)

Ongoing Phase II.

F. References

1. Results from Aydin sampling of trench surface soils 11/82.
2. Phase I Soil Investigation by J.H. Kleinfelder & Assoc. 2/84
3. Soil sampling by Levine•Fricke 4/84
4. Phase II Geotechnical Investigation by J.H. Kleinfelder 9/84
5. Levine•Fricke subsurface investigation proposal 11/84

DURA-BOND BEARING COMPANY
3201 Ash Street
Palo Alto, CA. 94306

Site #: OG 98
File Name: Durabond

Reviewed 8/84;3/6/85

Reviewer:LAP/ MCT

A. Description of Site

Since 1960 the Dura-Bond Bearing Company, a division of McQuay-Norris, Incorporated, has manufactured camshaft bearings for the automotive industry at this site (1). For more information on manufacturing processes, see Reference #1. No information on former occupants or use in file.

Site contains:
- 2 non-vaulted storage tanks (1,000 gal solvent tank & 500 gal Gasoline tank).
- 1 - 5,000 gal non-vaulted liquid waste tank.
- 1 concrete sump.
- 3 machine pits

Hydrocarbon products which might reach liquid waste tank:
Tonna 68
Oakite
Waste Oil
Mobile Melt S122
Tellus 32
Ferrocote
Gasoline (unleaded)
Cimperial #10
MSDSs for above products in Engineer's file (SCH).

The liquid waste tank was placed in the ground in Dec. 1981 and first used Jan. 1982. The contents include water soluble coolant, lubricating oil, solvent #140, corrosion preventives, water treatment sludge, and heavy metals. These wastes are from various points in the manufacturing operation and are transported to the underground tank in a portable tank or bucket. The wastes are poured into the tank through a 6-inch diameter vertical riser pipe via a hose or funnel. The tank is emptied when necessary with a vacuum truck. (MRK memo 11/21/83).

Attachments: #1 Site Maps
#2 Revised Facilities Questionnaire

B. Geology

Soils in the area composed of interbedded silt, sand, clay, and gravel lenses. No competent clay layer (>5 ft. thick) was identified (2).

2 Borings; deepest 36.5 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs

Hydrogeology

Only 2 monitoring wells (MW) constructed so little hydrogeologic data available. Shallowest groundwater (GW) at ~14 ft.

2 MWs; deepest 36.5 ft.

C. Contamination

See Risk Assessment - Chemical Principles: Questions 1,2,3,4.

For chemicals stored on site: No chemicals detected which Dura-Bond states it stores on site. Peter Jones (City of San Jose) feels that the chemicals found in the MWs are characteristic of the type of operation at Dura-Bond. He states they probably have a caustic cleaning system and/or a degreasing operation (SCH note 7/6/84 - see Attachment #9).

Soil contamination - no chemicals detected (VOCs not tested for).

GW contamination - 10 chemicals. Major contaminants:

Trichloroethylene	708 ppb
Acetone	45 ppb

Emcon thinks VOC contamination from offsite (Attachment #6)

Attachments:

#4	Lab Results	1/83
#5	Lab Results/Contamination Info	11/83
#6	" " " "	2/84

D. Case Chronology

3/16/81	"Soil Contamination Investigation & Impoundment Closure Plan" by Emcon Associates received. Heavy metal contamination of soils detected (Cd, Cr, Fe).
3/20/81	DOHS responds to proposal to close surface impoundment and requires upper 2 ft. of contaminated soil be removed to a Class I landfill, and 3 ft. of less contaminated soil underneath be removed to a Class II-2 landfill.
6/7/82	Facilities Questionnaire received.
6/23/82	Dura-Bond letter with revised Facilities Questionnaire received (Attachment #2).
2/2/83	"Subsurface Investigation to Evaluate the Integrity of Subsurface Tanks" report by Dames & Moore completed. One boring/MW constructed (to 36.5 ft.). Findings: No detection in analysis for hydrocarbons using GC/FID (Reference standards Stoddard Solvent, Gasoline, & Oil).
2/28/83	RWQCB letter states no further investigation necessary. (Attachment #7)
11/14/83	Emcon report to determine if accidental oil spillage had contaminated soils & GW near liquid waste tank received (Dura-Bond had observed staining on the sand backfill near the riser pipe of the tank and decided to put a MW in since the tank backfill is in continuity

with the underlying soil). One boring/MW constructed (to 26.5 ft.). Findings: No detection for Stoddard Solvent but some unidentified compounds detected (see Attachment #5).

12/7/83 RWQCB finds methods of soil & GW analysis unacceptable and requires resampling of GW with EPA method 625 (complete BNA scan). Deadline for results 1/6/84.

3/16/84 GW resampling results by Emcon received. Findings: GW contamination. Chlorinated compounds detected not used by Dura-Bond and "to the best of their knowledge have not been used in their operations" (Attachment #6).

7/6/84 SCH note in file with comments by Peter Jones noted above (Attachment #9).

Attachments: #7 RWQCB letter 2/28/83
#8 " " 12/7/83
#9 SCH note 7/6/84

E. Current Status (as of 3/6/85)

Phase II.

F. References

1. "Soil Contamination Investigation and Impoundment Closure Plan" by Emcon Associates 3/81
2. "Subsurface Investigation to Evaluate the Integrity of Subsurface Tanks" by Dames & Moore 2/83
3. Subsurface investigation by Emcon Associates 11/83
4. Resampling results by Emcon Associates 2/84 (Attachment #6)

FAIRCHILD CAMERA AND INSTRUMENT CORP. Site #: OG 99
Research and Design Division File Name: B:FCPA
4001 Miranda Ave., Palo Alto

Date Reviewed: 3/12/85 Reviewer: MCT

A. Description of Site

Fairchild facility is on a 9.3 acre parcel, with an occupied space of total plant building ~4.1 acres (2). No information on operations, length of occupancy, former occupants or use in file.

No Facilities Questionnaire in file (no tank inventory). A new neutralization system was expected to begin operation 8/84 - at that time old neutralization system discontinued (2).

Dry Well (assumed source of contamination) installed 1962.

Attachments: #1 Site Maps

B. Geology

"The boring records exhibit a complex interbedding of heterogeneous materials consisting primarily of low permeability silty sand and clayey sand layered with even less permeable sandy and gravelly clays and silty clays" (2). Boring logs show stratigraphy varies significantly across the site.

26 Borings on site (2); deepest 100.8 ft.

Soil classification per Risk Assessment Question #11.

Hydrogeology

Two aquifer layers defined but no range data in file. Shallowest groundwater (GW) at ~5.5 ft (Boring #9). Average GW gradient 1.7%, with an average GW gradient in the vicinity of the Dry Well (Boring #19) of ~1.0% (1).

Piezometric data indicates that groundwater (GW) in the relatively shallow aquifers moves in an eastward direction to recharge the Newark Aquifer of the adjacent Niles sub-area (1).

"The aquifer system exhibits poor hydraulic communication between water bearing seams or lenses and limited recharge sources" (2).

Site is bisected by Barron Creek (1). Site is located in San Francisquito Cone - recharge occurs from 4 principal sources: infiltration from San Francisquito Creek and Lake Lagunita (both NW of Fairchild), deep percolation, and subsurface inflow (1).

24 Monitoring Wells (MW); deepest 100.8 ft.:

- 19 MWs onsite
- 5 MWs offsite
  - 2 on VA Hospital property
  - 2 on Stanford property
  - 1 (#16) located South of site between Miranda Ave and Foothill Expressway (2).

Regional GW gradient NW, 65 water wells within 1 mile of Fairchild (SWRCB memo 10/28/82).

Attachments: #3 GW elevation contour maps

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: no information on chemicals stored on site in file.

Soil contamination - 14 chemicals. Major contaminants:

Xylene	515 ppm
Dichlorobenzene	238 ppm
Trichloroethylene	194 ppm

GW contamination - 6 chemicals. Major contaminants:

Trichloroethylene	190 ppm
Tetrachloroethylene	13 ppm
1,2-Dichloroethylene	11.2 ppm

Contaminant plume originates in the vicinity of the dry well and extends downgradient in an ENE direction (2).

Subsurface investigations initiated by Fairchild in 1982 as part of a corporate-wide program (1).

Standing water noted in manhole (dry well) located on west side of Fairchild site during routine environmental inspection by Fairchild personnel contained TCE and PCE concentrations of 2.0 and 2.1 ppm, respectively. Investigation of manhole initiated 9/21/83. Further inspection revealed a single four-inch vitrified clay pipe entering the manhole immediately above floor level. It was demonstrated that floor drains in the basement level chemical mix area were connected to the vitrified clay tile at the manhole. The floor drains were plugged to prevent the potential for flow to the manhole (1). "Although no solvent spills are known to have occurred in the dry well, it appears to be the probable source of past solvent leakage to the groundwater at the site" (2).

Total Tested Solvents (TTS) decreases from 1379 to 0.051 ppm from 5 to 39 ft. and from 745 to 0.574 ppm from 14 to 24 ft in soil samples from the dry well. Canonie claims vertical extent defined at this source from extrapolation of soil profile samples (2).

TCE was detected in production well on VA property - consultants claim contamination from residual oil on the discharge pipe rather than solvent migrations from the Fairchild facility (2). Two other wells on VA property (labeled VA-1 and VA-2) were contaminated with volatile organics and semi-volatile organics, mainly hydrocarbons (no lab report in file for specifics on chemicals). Canonie concludes chemicals found in these wells did not migrate from Fairchild based on the types of materials found, their distance from the Fairchild property, the regional GW gradients, and absence of particular compounds of interest in the VA production well between Fairchild and VA-1/VA-2 (2).

Attachments: #4 GW sampling results - Shallow Wells (3)
#5 " " " - Deep Wells (3)
#6 " " " - VA wells (3)
#7 Soil Sampling Results
#8 RWQCB plume maps - TCE
#9 RWQCB plume maps - TCA

D. Case Chronology

1/82	Initial subsurface investigation by Emcon (1). From 1-6/82 16 MWs installed.
4/82	Canonie retained by Fairchild to oversee environmental investigations.
6/82	Canonie undertook direct management of investigations (1).
10/20/82	Fairchild letter to RWQCB asked permission to destroy wells 1,2, and 3 and install a new well (2A), and to modify sampling frequency (Attachment #10).
10/28/82	SWRCB letter received with comments on investigation.
8/11/83	Canonie restated recommendations described in 10/20/82 Fairchild letter, informing RWQCB of Fairchild's intent to destroy wells 1,2,3 (done 8/18-19). Well 2A installed 8/17 (1).
10/10/83	Fairchild reports a chemical spill (Attachment #11).
11/8/83	Well #11 destroyed due to construction of new treatment facilities at that location (1).
1/3/84	Canonie letter to RWQCB with history of investigation after discovery of manhole.
2/84	Hydrogeologic Data Update report by Canonie Engineers.
2/6/84	Fairchild letter to City of Palo Alto to answer questions about subsurface investigation (Attachment # 12).
2/23/84	RWQCB asks VA to destroy 500 ft. deep inactive well to avoid contamination of deeper GW zones.
3/13/84	VA letter received documents granting of Fairchild's request to construct 2 MWs on VA property.
4/10/84	Analytical results from 6 new MWs by Canonie received.
4/17/84	Documentation of ND for wells located on Stanford property received from Canonie.
5/3/84	Canonie letter received with remedial measure alternatives (Attachment #13)

6/15/84	RWQCB letter summarizing 5/24/84 meeting with Fairchild and Canonie. Conflict over extent of definition of plume. Agreed a report should be prepared to document Fairchild's contention that plume had been defined and to address cleanup options.
8/13/84	Proposed Remedial Action report by Canonie Engineers received in response to 5/24/84 meeting.
3/12/85	RWQCB letter agrees to interim plan from 2/26/85 meeting for installation of an extraction well and more definition of plume with MWs to "C" aquifer as well as additional "A" and "B" MWs.

Attachments:				
	#10	Fairchild	letter	10/20/82
	#11	"	"	10/10/83
	#12	"	"	2/6/84
	#13	Canonie	"	5/1/84
	#14	RWQCB	"	3/12/85

E. Current Status (as of 3/12/85)

Ongoing Phase II.

F. References

1. Hydrogeologic Data Update (Draft Report) by Canonie Engineers 2/84 (Project CE-063).
2. Proposed Remedial Action - Advanced Research Laboratory report by Canonie Engineers 7/84 (Project CES 82-063)
3. Monthly Status Report by Canonie Engineers 12/84

APPLIED TECHNOLOGY
645 Almanor Avenue
Sunnyvale, CA 94088

Site #: NA 2
File Name: AT

(NOTE: Both Facilities Questionnaire and Phase I report could not be found in either engineer's or case file; all data from above referenced from either Phase II report or other correspondence.)

Facility: 2 buildings

Reviewer: MCT

A. Description of Site

Applied Technology (AT)is a division of Itek Corp. No info on operations, occupancy length, or prior use in file.

Acid neutralization sump and photography lab sump located between two buildings on site (see Attachment #2). No information on chemicals stored on site in file.

Attachments: #1 Site Location Map
#2 Site Map

B. Geology

Site underlain by clayey silt to silty clay sediments, with lenses of sand and gravel and silty sand that vary in thickness from 1 foot to 6 feet.

4 Borings; deepest boring 44.5 feet (see Attachment #4 for locations).

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs (4 sets)

Hydrogeology

4 Monitoring Wells (MW); 2 located downgradient (DG) of the acid neutralization sump, 2 located upgradient (UG) of the sump.

One aquifer layer defined - no info on depth range.

Shallowest groundwater (GW) at 6 ft. GW flow NNW. GW gradient estimated by MCT to be ~2% based on data from Attachment #4 (figure 3). No info on GW velocity.

Hydraulic conductivity for pervious zone 5.1 x e-4 to 1.1 x e-4 cm/sec. Falling head permeability testing (9/9/83) on 2 wells - for results see Attachment #4 (figures 4 & 5).

Attachments: #4 Hydrogeologic Data (4 pages)

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

Soil contamination - 6 chemicals. Major contaminants:

TCA	8,100 ppb
Freon	240 ppb

GW contamination - 7 chemicals. Major contaminants:

TCA	5,300 ppb
Chloroform	742 ppb

Phase I study showed leakage from buried acid neutralization tank at the NW corner of Bldg. 8. Soils adjacent to tank contaminated with TCA; GW contaminated with TCE, TCA, 1,1-DCE, Chloroform, and Freon. The tank was cleaned and lined after Phase I results - contamination attenuated after lining (see more recent lab results enclosed for 12/83 and 3/84 - Attachments #7,8). (Phase I data from Phase II report - see Attachment #9)

Facilities UG: Ampex, Exar-Integrated, Advanced LSI, Zymos, Data General, Verbatim, Xidex. Closest facilities UG Ampex and Exar-Integrated - common contaminants trans-1,1-DCE, TCA, Freon (Ampex and Exar), TCE, 1,1-DCE (Ampex only), Methylene Chloride and Cloroform (Exar only).

Facility DG Circo, Inc. - common contaminants Freon, Chloroform, trans-1,2-DCE. AT has higher levels of contamination for all except trans-1,2-DCE.

RWQCB plume map showed limited contamination (Attachment #10).

Attachments:	#5	Lab Results	6/20/83
	#6	" "	9/20/83
	#7	" "	1/11/84
	#8	" "	4/17/84
	#9	Summary of Phase I results	
	#10	RWQCB plume map	

D. Case Chronology

Leak Detection Program 1982

5/25/82	Facilities Questionnaire completed (Attachment #11)
6/20/83	AWO memo reported that City of Sunnyvale detected TCA in sewer discharge from acid neutralization sump located on site (Attachment #12)
7/6/83	RWQCB received lab results from GW and soil analysis showing significant contamination (Attachments #5,11).
10/83	Phase II report by Woodward-Clyde Consultants completed. Findings: GW and soil analysis showed much lower levels of TCA and other contaminants. Woodward-Clyde contends that cleaning and relining of acid neutralization sump has sealed the probable source of contamination (Attachment #13). Subsequent tests showed continued low levels of contamination.

7/5/84 RWQCB indicated that chemical leak from acid neutralization sump is no longer a water quality problem and that no further investigation was necessary (Attachment #14).

E. Current Status (as of 9/7/84)

N/A

References

Woodward-Clyde Consultants (10/83)
Misc. Correspondence

QUME CORPORATION
2350 Qume Drive
San Jose, CA 95131

Site #: NA 3
File Name: Qume

Reviewed 4/17/85, revised 5/31/85

Reviewer: MCT

A. Description of Site

No information on operations, length of occupancy, prior occupants or use in file.

2 tanks on site:
- 1 - 12,000 gal nonvaulted diesel fuel tank
- 1 - 350 gal nonvaulted solvent waste storage tank

Solvent waste tank used from 1979-82, excavated 11/84 (see Attachment #5 for additional tank information).

Chemicals stored in solvent waste tank: Freon, Acetone, Isopropanol, Fedron (Attachment #5).

Attachments: #1 Site Map
#2 Facilities Questionnaire

B. Geology

Site underlain by interbedded layers of silty clay and fine sands.

3 borings; deepest 32.5 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs

Hydrogeology

2 Monitoring Wells (MW); deepest 32.5 ft. Shallowest groundwater (GW) encountered at 11.5 ft. (1). No information on GW gradient, flow direction, or velocity in file.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site - Freon detected in both soil and GW.

Soil contamination - 3 chemicals:

Xylene isomers and Ethylbenzene*	900 ppb
Methylene Chloride	180 ppb
Freon	100 ppb

GW contamination - 1 chemical:

Freon	8 ppb

No information on possible sources of contamination in file.

*Xylene isomers and Ethylbenzene treated as one chemical group in chemical analysis report.

Attachments: #4 Lab Results

D. Case Chronology

Leak Detection Program 1984.

1/23/84	Facilities Questionnaire received.
4/23/84	Qume letter received with solvent tank information.
4/26/84	RWQCB letter directs Qume to do subsurface investigations for both storage tanks (Attachment #6).
5/16/84	Safety Specialists letter to Qume with proposal for hazardous waste management program.
6/14/84	Safety Specialists sends Qume a more detailed sampling program.
7/12/84	RWQCB letter gives conditional approval of Safety Specialists' proposal.
7/16/84	Safety Specialists notifies Qume of GW MW installation.
9/27/84	Safety Specialists letter received with results from GW monitoring. Findings: Freon detected in one well.
11/28/84	Safety Specialists letter received. Tank removal complete, post removal soil analysis shows contamination (Attachment #7).
12/19/84	Phase II proposal from Safety Specialists received.
12/31/84	RWQCB approves Phase II proposal for continued investigation (Attachment #8).
2/21/85	PCM memo notes soil and GW samples taken 1/85 with 601/602 analysis counter to RWQCB letter 12/31/84 asking for 624/625 analysis. Agreement from consultants to resample with 624/625 analysis.
4/15/85	Safety Specialists submit new GW and Soil analysis.
5/20/85	RWQCB letter gives NA status to Qume (Attachment #9).

Attachments:			
	#5	Qume letter	4/19/84
	#6	RWQCB "	4/26/84
	#7	Safety Specialists letter	11/27/84
	#8	RWQCB letter	12/31/84
	#9	" "	5/20/85

E. Current Status (as of 5/31/85)

NA - semiannual monitoring required.

F. References

1. GW MW results by Safety Specialists 9/84.
2. Tank Excavation/Soil Sample Analysis by Safety Specialists 11/84.

Burke Industries   Site #: NA 4
2049 Senter Rd, SJ   File Name: Burke

Facility: 1 Bldg
Date Reviewed: 7/84   Reviewer: LAP/LK

A. Description of Site

No info re: length of occupancy, previous use of site.
Facility manufactures rubber products; use of liquid latex was discontinued ~1978-79; phthalates were not used; above-ground storage tanks and equipment removed.

1 1000 gal clarifier, installed 1969; discontinued ~1979; no flow through of any liquids during this time.
Clarifier was subject of test boring 2 yrs ago and was cleared of any leakage (RWQCB file 1220.03, 9/8/83).

Chemicals used on site not specified.
Composition of latex used = carboxylated styrene butadiene polymer, fatty acid soap, calcium carbonate, ferrous oxide, sodium polyacrylate thickener.
Latex stored above ground.

Facilities in vicinity = US Cellulose, upgradient with NA status; Lorentz Barrel & Drum, downgradient. Burke located between Santa Clara Co (SCC) Transit yard and Coyote Creek.

Attachments: #1 - Site Location Map
#2 - Facility Map
#3 - Facility Questionnaire 7 pgs
#4 - S. 10th St Facility Information 11 pgs

B. Geology

1 Boring. Boring Log indicates soil = clay, sand and gravel.

Soil classification per Risk Assessment Question # 11.

Attachments #5 - Boring Log 2 pgs

Hydrogeology

1 GW Monitoring well.
1 aquifer sampled; depth = 18-38 ft.
Shallowest GW = 18 ft.
GW flow direction = NW for area.
GW gradient not determined.

Attachments #6 - Hydrogeology Information 2 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected: GW = 0 (Base/Neutrals only) soil = 3

Soil contamination from composite sample taken at 5, 10, 15, 20 and 25 ft. = (ppb)

Unknown organic (MW 400)	14,000
Di-n-butyl phthalate (DBP)	640
Bis(2-ethylhexyl) phthalate (DEHP)	380

Water analysis of clarifier contents initially showed
Total Organic Carbon 9 mg/L.
Correspondence between RWQCB and facility directed GW analysis specifying styrene and butadiene (composition of latex used on site).
Base/Neutral analysis = all less detection limit (<20 ppb).

RWQCB Site Inspection revealed no obvious source of phthalate contamination.
Possible source may be SCC Transit yard, upgradient. Yard reports loss of 400,000 - 300,000 gal fuel in the ground through a fuel line.

Attachments: #7 - RWQCB Soil Contamination Map
#8 - GW/Soil Data 3 pgs
#9 - Correspondence 6 pgs
#10 - RWQCB Memo re: Source

D. Case Chronology

5/82	Facility Questionnaire completed
12/82	California Environmental Technology retained by Burke
2/83	Industrial water sample taken; not acceptable analysis for integrity of site
3/83	Subsurface investigation required
6/83	1 Monitoring well installed
7/83	GW/Soil analysis Findings = soil contamination
9/83	No apparent leakage from sump on site

E. Current Status

9/83 No apparent leakage from sump on site
Facility status = NA
No further action.

Attachment: #11 - RWQCB Correspondence re: Status

F. References

California Environmental Technology correspondence:
12/16/82, 2/15/83, 4/19/83, 7/27/83

INTERNATIONAL MICROELECTRONICS
PRODUCTS (IMP), INC.
2830 North First Street
San Jose, CA 95134

Site #: NA 5
File Name: IMP

Date Reviewed: 9/26/84

Reviewer: MCT

A. Description of Site

IMP manufactures semiconductors, moved here from Mountain View in early '82. Prior use of land for agriculture.

Site contains one underground triple vault containing tanks for collecting waste solvents and hydroflouric acid, and for collecting, neutralizing, and discharging other aqueous wastes.

No Facilities Questionnaire in file; all data from baseline study done before beginning of operations at San Jose site.

Attachments: #1 Site Location Map
#2 Site Map

B. Geology

Site underlain by interlayered sands and clays.

2 borings; both borings 45 ft. deep.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs

Hydrogeology

One aquifer layer defined. Groundwater (GW) at 14 ft. No GW flow data but regional GW flow to the northwest. Only 2 Monitoring Wells so little data (GW gradient, velocity) available.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

No chemicals stored on site at time of study.

Soil contamination - 2 chemicals:

Methylene Chloride	31 ppb
Methyl Ethyl Ketone	2 ppb

GW contamination - 3 chemicals:

Methylene Chloride	22 ppb
Methyl Ethyl Ketone	1.7 ppb
TCA	1 ppb

Upgradient facilities - Van Waters and Rogers (VWR), San Jose Graphics. N/C at San Jose Graphics. Extensive contamination at VWR - might be source of contamination for IMP (MCT determination).

Attachments: #4 Lab Results 6/8/82

D. Case Chronology

Initial investigation by IMP to collect baseline data before beginning of operations.

6/27/83	Phase I subsurface investigation by Wahler Associates received by RWQCB. 2 Borings/MWs constructed. Findings: Low levels of soil and GW contamination.
7/19/83	RWQCB requires no further investigation but requests monitoring on a semiannual basis.

Attachments: #5 RWQCB letter 7/19/83

E. Current Status (as of 9/26/84)

N/A

F. References

Wahler Associates Phase I report 6/21/82

SPERRY UNIVAC (former occupants) Site #: NA 6
3300 Scott Blvd. File Name: Sperry
Santa Clara, CA

Date Reviewed: 10/5/84 Reviewer: MCT

A. Description of Site

3300 Scott Blvd., Santa Clara is a commerical rental property owned by Century Properties Equity Partnership 72 with Fox and Carskadon Financial Corporation as its general partner (2).

Sperry Univac occupied site from 10/76 to 7/83. Sperry taken over by Control Data Corporation at that time - now known as Magnetic Peripherals (a Control Data Company). Current tenants Hewlett Packard (offices only).

3300 Scott site used by Sperry as offices and for light assembly. From 1976-79 Sperry operated a small degreaser on site that used Freon but only contained a couple of gallons. This degreaser was filled and emptied manually. The dirty solvent was sent out to a recycler. No TCA,TCE, or DCE was ever used or stored. (4)

No facilities questionnaire in file - apparently no underground tanks on site (HJS memo - see Attachment #11)

Attachments: #1 Site Location Maps
#2 Site Map

B. Geology

Subsurface soils consist of unconsolidated alluvial and interfluvial deposits of clays and silty clay with sand and gravel lenses.

7 Borings; deepest 30 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs
#4 Geologic Cross-sections

Hydrogeology

7 Monitoring Wells (MW); deepest 30 ft.

One aquifer layer defined. Shallowest groundwater (GW) at 5.3 ft. (1)

GW flows NE (3). Shallow GW moves towards San Tomas Creek. GW gradient is about 0.01 ft/ft (1) with velocity estimates ranging from 1.6 (3) to 2.4 (4) ft/day.

Boring MW-2 contained larger amounts of sand and gravel mixtures, indicating possible existance of a buried stream channel in the vicinity with a NE-SW orientation. (1)

Attachments: #5 Groundwater Contour Maps
#6 Possible location of buried stream channel

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: Freon detected in GW but David Keith Todd (consultants) maintains that since use of Freon on site was discontinued in 1979 and GW flow rate is 2.4 ft/day that the past degreasing operation could not be a source of current Freon contamination (4).

Soil contamination - no soil analysis performed.

GW contamination - 4 chemicals. Major contaminants:

TCE	250 ppb
Freon	160 ppb

RWQCB letter dated 4/25/84 determined that contamination found in MWs from off-site sources.

There is a building foundation on the south edge of the property with an excation approximately 15-20 ft. deep, and concrete walls being constructed below the ground surface. This strucure was being constructed during monitoring in 11/83. The effects of the concrete structure are twofold:

1. Inhibition of shallow GW movement off-site and
2. The structure acts as a "cutoff wall" - chemicals are unable to migrate in a northerly direction. This is cited as a cause for an attenuation of contaminant levels between 11/83 and 1/84. (4)

Applied Materials is immediately upgradient to site - all chemicals detected at 3300 Scott Blvd. were also detected at Applied Materials site.

Avantek is directly east (across the street) from 3300 Scott site - common contaminants TCA, TCE, and Freon.

Attachments: #7 Lab Results
#8 Plume maps by J.H. Kleinfelder
#9 Graphs of contamination over time
#10 RWQCB plume maps

D. Case Chronology

Varian Associates discovered contamination in 9/83 during site check when considering purchase of property.

9/22/83	Subsurface investigation by J.H. Kleinfelder for Varian Associates completed. 7 Borings/MWs constructed. Findings: GW contamination found, possible existence of buried stream channel through site based on hydrogeologic data.
10/4/84	Review of Varian report by David Keith Todd, Consulting Engineers, Inc. completed. No new information.
11/14/83	HJS memo states no underground tanks on site.
12/14/83	Additional studies by David Keith Todd completed. Preexisting wells retested. Findings: GW contamination levels similar to those of Varian report, separate source of Freon contamination in southeast corner of site noted.
2/27/84	Additional studies by David Keith Todd completed. Findings: attenuation of contamination (see above).
4/25/84	RWQCB letter to Fox & Carskadan Financial Corporation stating source determined to be from offsite and no further investigation necessary.

Attachments: #11 HJS memo 11/14/83
#12 RWQCB letter 4/25/84

E. Current Status (as of 10/5/84)

N/A. MWs must be left intact for maximum of six months to aid in studies of companies upgradient.

F. References

1. J.H. Kleinfelder & Assoc. (9/83) study for Varian Associates.
2. David Keith Todd, Consulting Engineers, Inc. review 10/4/83
3. " " " " " " study 12/14/83
4. " " " " " " study 2/27/84

Misc. Correspondence

Economics Laboratory, Inc. Site #: NA 8
640 Lenfest Rd, San Jose 95133-1694 File Name:EconLab

Facility: 1 Bldg
Date Reviewed: 7-5-84 Reviewer: LK

A. Description of Site

Facility built 1960; previous use of site was agricultural. Manufactures variety of household cleaning/laundry products.

3 7250 gal underground non-vaulted solvent storage tanks, NE corner of bldg; installed 1972; bottom of tank 4 ft below grade.

1 2500 gal abandoned underground storage tank NW corner of bldg, 6 ft below grade; installed 1960, stored IPA til 1975 and diesel fuel til 1980; abandoned 1980 because too small.

1 10,000 gal underground diesel fuel tank, installed 1981.

1 275 gal underground non-vaulted chemical spill containment tank, installed 1981, never used.

2 4500 gal WasteWater Neutralization units, installed 1972; 35,000 gpd.

Chemicals used on site: Heavy aromatic naptha, Aromatic hydrocarbon solvents (individual chemicals not specified), Butyl cellosolve.

Attachments: #1 - Site Location Map
#2 - Facility Map
#3 - Facility Questionnaire, 11 pgs

B. Geology

2 Borings, completed as Monitoring Wells (MW).
Soils unconsolidated clay with occassional lenses of sand & gravel.

Soil Classification per Risk Assessment Question # 11.

Attachments: #4 - Boring Logs/Key, 3 pgs

Hydrogeology

2 MWs; 1 Aquifer
Shallowest GW is 5 ft, near MW-1.
GW flow is West.
Gradient not given; raw data not given to calculate.

Attachment: #5 - Hydrogeologic Data

C. Contamination

See Risk Assessment Chemical Properties Questions 1,2,3,4.

Total chemicals in GW = 0 soil = 2

Soil and water analyzed by GC/MS using EPA 625.

Soil contamination at MW-1; no contamination around abondoned tank, MW-2.
Initial soil samples 4/83 from 11-11.5 ft:
Butyl cellosolve 530ppb Aromatic hydrocrbons 24ppb.
Exact identification of hydrocarbons not attempted.
Lateral extent of soil contamination not examined.

Repeated soil and GW samples 9/83 from .5-3 ft = ND.

11/1/83 RWQCB memo notes soil sampling 9/83 not deep enough to detect any tank leak; GW samples too deep (18 ft below grade) since contaminants lighter than water.

Attachments: #6 - Soil/GW Data 4/83, 3 pgs
#7 - Soil/GW Data 9/83
#8 - Contamination Map
#9 - RWQCB Memo re: Sampling Technique

D. Case Chronology

6/1/82 Facility Questionnaire completed for Leak Detection Program

4/83 Phase I Subsurface Investigation by J.H.Kleinfelder & Associates
Findings - No GW contamination
Soil contamination; hydrocarbons detected not specified; lateral extent of contamination not determined.

9/83 Phase II Supplemental Data by J.H.Kleinfelder & Asso
Findings - No soil /GW contamination detected;
4 soil/1 aqueous sample done; detection limit 10 ppb.

E. Current Status

11/83 RWQCB Memp = resample within 6 months - ie, 6/84.

Attachment #10 - RWQCB Correspondence re: Status

F. References

1. J.H.Kleinfelder & Asso report 4/83, 2 pgs.
2. J.H.Kleinfelder & Asso report 9/83, 2 pgs.
3. Facility Questionnaire (Attachment #3).

AMDAHL CORPORATION
1250 East Arques
Sunnyvale, CA

Site #: NA 9
File Name: AMDAHL

Facility: 10 buildings

Date Reviewed: 9/12/84

Reviewer: MCT

A. Description of Site

No information on operations, length of occupancy, prior occupants or use in file.

Current underground tanks:
1 vaulted, 1 non-vaulted diesel fuel tank (c)
2 vaulted 750 gal Hydrofluoric Acid tanks (c)
2 vaulted acid neutralization tanks (846 gal. each)
1 300 gal. deionized water reclamation sump (c)
1 500 gal. acid neutralization sample box

Tanks no longer in use:
1 Hydroflouric Acid (HF) waste storage tank (removed 4/82)
1 non-vaulted 500 gal solvent waste tank (to be removed) (c)
See Attachment #4 for former contents of tanks no longer in use.

Attachments: #1 Site Location Map
#2 Site Map
#3 Facilities Questionnaire
#4 Tank Contents List

B. Geology

"The general profile of the site consists of 1 to 3 feet of fill underlain by 6 to 12 feet of brownish gray, silty clay, stiff, slightly plastic with moisture content increasing with depth. Between the 10 and 14-foot depths an approximate 2-foot thick layer of silty sand to clayey silt exists. This zone is saturated, fine grained and generally soft. Material below this consists of blue gray, silty clay that is stiff and plastic." (2)

3 Borings - deepest 25 ft. (see Attachment #5 for locations)

Soil classification per Risk Assessment Question #11.

Attachments: #5 Boring/Monitoring Well Location Map
#6 Boring Logs

Hydrogeology

3 Monitoring Wells (MW) - deepest 25 feet (see Attachment #5 for locations).

Shallowest groundwater (GW) at 4.3 ft (2). GW flow determined to be to the northwest in Phase II report, although Phase I study reported an anomalous southernly GW flow of 1-1.5 ft/day under the then newly excavated Hydroflouric Acid tank (see Attachment #7). The Phase II results refuted the theory that a sump located at the nearby National Semiconductor site was locally influencing GW flow (see Attachments #8 and #7, page 3).

No information on gradient found.

Phase II report states that "the 2-foot zone of silty sand to clayey silt occurring in all three borings at depths between 10 and 14 feet can be expected to act as the main layer which water can be transmitted through the site" (Attachment #9).

Attachments: #7 GW flow data (3 pages)
#8 J.H. Kleinfelder conclusions
#9 Hydrogeologic data

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: TCA (14 ppb) and Freon (3 ppb) detected in GW.

Soil contamination - only soluble flouride tested for in soil.

GW contamination - 2 chemicals. Major contaminants:

Freon	2.2 ppb
1,1,1-TCA	1.2 ppb

Source of VOC contaminants unclear.

Attachments: #10 Lab Results 3-5/83
#11 RWQCB plume map
#12 Soil Sample Location Map

D. Case Chronology

Leak Detection Program 1982

Early 1982	Leak detected in HF storage tank. Metcalf & Eddy in May and June 1982 supervised removal of tank and excavation of surrounding soils and performed initial study to determine extent of contamination.
6/25/82	Facilities Questionnaire completed.
11/16/82	RWQCB directs Metcalf & Eddy to do additional soil and GW sampling to determine extent of HF migration (Attachment #13).
12/27/82	Metcalf & Eddy reports to Amdahl findings and recommendations.
4/83	Phase I subsurface investigation by J.H. Kleinfelder & Associates completed. Findings: GW contamination and Flouride contamination in soil.

7/83 Phase II report by J.H. Kleinfelder completed. Findings: very low levels of GW contamination (15.1 ppb or less) except for flouride. Part of reason for report tank closure process. 1-550 gal. waste solvent tank still in service but will be abandoned and removed after completion of new vaulted tank area.

8/5/83 RWQCB letter stating "it appears that the underground solvent tank at that facility has not leaked. It also appears the remedial measures taken last year after excavation of the leaking HF tank were adequate to prevent significant fluoride contamination of the local shallow groundwater." No further action is required (Attachment #14).

9/14/83 4,000 gal. diesel tank removed - thin sheet of oil found on GW surface - thought by J.H. Kleinfelder to be sleeve surrounding diesel tank fill pipe which was broken during the lifting of the tank (Attachment #15).

Attachments: #13 RWQCB letter 11/16/82
#14 RWQCB letter 8/5/83
#15 J.H. Kleinfelder letter 9/14/83

E. Current Status (as of 9/12/84)

N/A

F. References

1. J.H. Kleinfelder and Associates 4/83
2. J.H. Kleinfelder and Associates 7/83
Misc. correspondence

BECKMAN INSTRUMENTS
1117 California Ave
Palo Alto, CA 94304

Site #: NA 11
File Name: Beckman

Reviewed 4/19/85

Reviewer: MCT

A. Description of Site

Beckman is a manufacturer of laboratory/scientific/ananlytical equipment and have occupied site since 1955 (Attachment #1). No information on prior occupants or use in file.

1 - 2,000 gal waste oil tank on site - excavated 10/28/82 (Beckman letter 6/83) due to facility expansion. Tank never contained solvents.
2 sumps on site used to collect accidental oil spillage from oil drums or storage containers (Attachment #1).

For a list of chemicals stored on site, see Attachment #1. Blueprint of site in LDP file.

Attachments: #1 UIC Program Questionnaire
#2 Facilities Questionnaire

B. Geology

No boring logs, only shallow soil samples taken.

Hydrogeology

No monitoring wells installed.

C. Contamination

Localized oil & grease contamination of soil detected when waste oil tank excavated prior to facility expansion. VOCs not tested for.

Attachments: #3 Lab Results, excavation inspection report.

Case Chronology

Leak Detection Program 1982.

6/1/82	Facilities questionnaire received.
10/4/82	Brown & Caldwell letter submitted with proposal for integrity testing of underground waste oil tank.
6/10/83	Beckman letter received with Brown & Caldwell excavation inspection report. Findings: small localized soil contamination with oil and grease due to proximity to fill trough, conclusion that tank didn't leak.

7/19/83 RWQCB letter stating no further investigation necessary (Attachment #4).

Attachments: #4 RWQCB letter 7/19/83

E. Current Status (as of 4/19/85)

N/A.

F. References

1. Brown & Caldwell sampling results 11/82

Bell Industries, Inc.
1161 N. Fairoaks Ave, Sunnyvale

Site #: NA 12
File Name: Bell

Facility: 1 Bldg
Date Reviewed: 6/84

Reviewer: LAP/LK

A. Description of Site

No info re: previous use of site.
Site bought 7/73; operations on site began 1974; operations on site for past 4.5 yrs = sale and distribution of electronic components. Previous operations on site not given.

4 4000 gal underground non-vaulted non-waste storage tanks; installed 1974; tank bottoms 9 ft below grade.

Chemicals used on site: AMSCO #17465 solvent and AMSCO #9324, both non-chlorinated petroleum distallates (specific chemical composition not itemized); Isopropol alcohol (IPA).

Upgradient facilities include AMD, Signetics, TRW, and KTI.

Attachments: #1 - Site Location Map
#2 - Facility Map 2 pgs
#3 - Facility Questionnaire/Chemicals 5 pgs

B. Geology

1 Boring by JH Kleinfelder Asso, converted to monitoring well.
1 Boring by International Engineering Co, Inc (IECO) for shallow (8.5 ft) soil sample within 5 ft of monitoring well.

Sediments on site consist of unconsolidated clay, silty clay, and clayey silt.

Soil classification per Risk Assessment Question # 11.

Attachment: #4 - Boring Logs/Soil Information 4 pgs

Hydrogeology

1 GW monitoring well. 1 aquifer sampled.
Aquifer depth not defined.
Shallowest GW = 8 ft on 5/24/83 per Kleinfelder report.
GW flow direction regionally = N towards SF Bay.
GW gradient not determined.

Site within SCVWD Zone 2; shallow aquifers in this Zone contain inferior quality GW due to tidal influence of bay.

Attachment: #5 - Hydrogeology Information 2 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected: GW = 3 soil = 0

GW Contaminants detected 6/83 (ppb):

1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	140
Dibutylphthalate (DBP)	20
Trichloroethylene (TCE)	2

Resample 7/84, complete EPA 624/625 scans showed:
soil (8 ft) - no detection
GW - Freon 113 60 ppb

Freon, TCE, and DBP reportedly not stored/used by Bell.
Upgradient facilities have detected TCE and Freon in soil and GW; phthalates have not been detected upgradient.

Attachments: #6 - RWQCB Contamination Map
#7 - GW/Soil Data 4 pgs
#8 - Contamination Information 4 pgs

D. Case Chronology

5/82	Facility Questionnaire completed
6/83	Phase I Subsurface investigation by JH Kleinfelder Findings - GW contamination
4/84	RWQCB directed repeated sampling
7/84	Soil and GW analysis by IECO per EPA 624/625 scans Findings - soil, no detection GW, 1 contaminant

E. Current Status

12/84 Facility given NA status.
GW sampling semiannually.

Attachment: #9 - RWQCB Memo re: Status

F. References

1. JH Kleinfelder & Asso report 8/10/83
2. IECO report 7/84
3. RWQCB correspondence re: resampling
4. Upgradient facilities information

Zilog, Inc. (Lessor) Site #: NA 13
Bridge Communications (Occupant) File Name: ZILOG40
Cupertino, CA 95014

Facility: 10440 Bubb Rd
Reviewed 7/12/84; 4/19/85 Reviewer: MCT

A. Description of Site

No history on Bridge Communications in file - GW investigation performed by Zilog (Kleinfelder report 8/83 includes both this and Zilog site at 10460 Bubb Road).

2 underground tanks contain acids: Sulfuric, Nitric, Hydroflouric.

Attachments: #1 Site Maps
#2 Facilities Questionnaire

B. Geology

Two borings; deepest 41.5 ft. Soil profile sand and gravels to 41.5 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs

Hydrogeology

No GW encountered to 41.5 ft. so no GW info.

C. Contamination

See Risk Assessment - Chemcical Properties: Questions 1,2,3,4.

No GW encountered so only soil analysis - minor contamination of 2 chemicals:

Toluene	16 ppb
Chlorobenzene	2 ppb

Facilities in area: Nitron Corp., Tymshare Inc., Acrian Inc., Packet Cable Inc., Measurex Corp. Nitron has no underground tanks, no info on others (none are cases).

Attachments: #4 Lab Results

Case Chronology

Leak Detection Program 1983

4/27/83	Facilities questionnaire received.
5/19/83	RWQCB letter requiring Phase I investigation.
8/15/83	Phase I report by J.H. Kleinfelder & Associates submitted. Study of both Zilog facilities (10440 & 10460 Bubb Road). Findings: Low levels of soil contamination, no GW encountered.
8/25/83	RWQCB letter stating no further investigation necessary at this time (Attachment #5).

Attachments: #5 RWQCB letter 8/25/83

Current Status (as of 4/19/85)

N/A (assuming RWQCB letter to Zilog covers both facilities)

References

1. Phase I report by J.H. Kleinfelder & Associates (8/83)

Safeway Chemical Co	Site #: NA 15
909 Stockton Ave, SJ 95110	File Name:Safeway
Facility: 2 Bldgs	
Date Reviewed: 7/84	Reviewer: LAP/LK

A. Description of Site

No info re: length of occupancy, previous use of site, operations on site.

Safeway Chemical leases site from Bay Area Petroleum, owners of underground tanks.

1 10,000 gal underground non-vaulted non-waste storage tank; installed 4/77
1 10,000 gal underground non-vaulted waste storage tank; installed 4/77

Chemical used/stored on site: Stoddard Solvent (trade name Chevron 325).

Sealex facility located upgradient.

Attachments:		
	#1 - Site Location Map	
	#2 - Facility Map	
	#3 - Facility Questionnaire	5 pgs
	#4 - Facility Information	2 pgs

B. Geology

Soils in the area are composed of interbedded silt, sand and clay with trace to some gravel. No competent clay layer identified.

Soil classification per Risk Assessment Question # 11.

Attachment: #5 - Boring Log

Hydrogeology

1 GW monitoring well. 1 aquifer sampled.
Shallowest GW = 12 ft
GW flow direction = assumed NW
GW gradient not determined

Attachment: #6 - Soil/Hydrogeology Information 2 pgs

C. Contamination

See Risk Assessment Chemical Properties Question # 1,2,3,4.

Total chemicals detected: GW = 1 soil = 4

Complete EPA 624/625 scans done; results (ppb):

GW -	no priority pollutants detected		
	Methoxy methyl propanol	80	
Soil -	Toluene	24	15-16.5 ft
	Benzene	6.6	"
	Chloroform	5.9	"
	Ethylbenzene	1.4	"

Attachments: #7 - RWQCB Contamination Map
#8 - GW/Soil Data 2 pgs

D. Case Chronology

5/82	Facility Questionnaire completed
8/83	Phase I subsurface investigation by Dames & Moore Findings - soil and GW contamination
10/83	RWQCB letter re: no further investigation

E. Current Status

10/83	NA (no further investigation warranted) Requested semiannual GW monitoring

Attachment: #9 - RWQCB Correspondence re: Status

F. References

1. Dames & Moore report 8/83
2. EMCON draft proposal 4/27/83

ZILOG, INC.
1315 Dell Avenue
Campbell, CA 95008

Site #: NA 16
File Name: ZILOG60

Facility: 10460 Bubb Road, Cupertino.

Reviewed 7/12/84; 4/19/85

Reviewer: MCT

A. Description of Site

Zilog an affiliate of Exxon, conducts research & development for integrated circuits. No information on previous occupants or use in file.

Tank installed 1977 (Zilog letter 11/12/82). Tank contained waste solvents: Acetone, Isopropanol, Freon, TCA, Xylene, and n-Butyl Acetate. Tank use discontinued 6/83 (Kleinfelder report 8/83).

Attachments: #1 Site Maps
#2 Facility Questionnaire

B. Geology

One boring - soil profile sand and gravels to 45 ft (1).

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Log

Hydrogeology

No GW encountered to 45 ft. so no GW info.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: no chemicals listed in file detected in soil.

No GW encountered so only soil analysis - minor contamination of 3 chemicals:

Toluene	13 ppb
Tetrachloroethylene	8 ppb
Chlorobenzene	6 ppb

Facilities in area: Nitron Corp., Tymshare Inc., Acrian Inc., Packet Cable Inc., Measurex Corp. Nitron has no underground tanks, no info on others (none are cases).

NPDES permit #CA0028317, Order #77-98 (Attachment #5) issued 1977 to discharge reverse osmosis regect water to a non-tidal portion of Regnart Creek, a tributary of Calabazas Creek & S.F. Bay.

Discharge was stopped due to leak in storage tank (HJS memo 8/26/80 - Attachment #6). WT memo 6/15/81 (Attachment #7) states that reverse osmosis wastewater is discharged via a 3-way valve where:

1. effluent suspected of containing toxicants is diverted to sanitary sewer,
2. to storm drains,
3. to a holding tank. This tank is then pressurized. Reverse osmosis brine water is used for toilet flushing.

RWQCB spill incident report 9/1/82, DOHS letter 9/28/82 reported illegal hazardous waste dumping. Zilog in 10/20/82 letter explained that dumping was one-time cleaning of workbenches of photoresist (Cellosolve Acetate, N-butyl Acetate, & Xylene) with RT-2 stripper (Sulfuric Acid, Nitric Acid, Chromic Acid).

Zilog internal memo 12/3/82 of chemical leak occuring 11/15/82 enclosed - small acid spill (Attachment #8).

NPDES permit expired 6/82. New NPDES permit (#CA0028312, Order #83-23) filed 7/21/83 (Attachment #9).

Attachments:	#5	NPDES Permit #CA0028312 (7/19/77)
	#6	HJS memo 8/26/80
	#7	Compliance Monitoring Report 6/15/81
	#8	Zilog letter 12/6/82
	#9	Reissue of NPDES Permit 7/21/83

D. Case Chronology

Leak Detection Program 1982.

6/2/82	Facilities Questionnaire received.
4/18/83	Phase I report by J.H. Kleinfelder received. New report required because of inadequate sampling technique.
8/18/83	New Phase I report by J.H. Kleinfelder received. Report covers both Zilog facilities (10440 & 10460 Bubb Road). Findings: Low levels of soil contamination, no GW encountered.
8/25/83	RWQCB letter stating no further investigation necessary (Attachment #10).

Attachments: #10 RWQCB letter 8/25/83

Current Status (as of 4/19/85)

N/A.

References

1. Phase I reports by J.H. Kleinfelder & Associates (4/83, 8/83)

CONTAINER CORPORATION OF AMERICA
2500 De La Cruz Blvd.
Santa Clara, CA 95050

Site #: NA 17
File Name: CCA

Facility: 1 building

Date Reviewed: 9/19/84

Reviewer: MCT

A. Description of Site

Folding Carton Division of Container Corporation (CCA) located on this site. No information on length of occupancy, former use or occupants in file.

10 underground storage tanks (8 storage tanks, 2 waste tanks) located onsite, each containing one or more of the following: Diesel & Bunker fuel, Isopropanol, Isopropyl Acetate, Ethyl Alcohol, Mixed Hexanes, Toluene, Methyl Ethyl Ketone (MEK).

Contents of tanks associated with Rotogravure printing operation. Process was converted to use of water-based inks and tanks were removed 8/83.

Attachments: #1 Site Location Map
#2 Site Map
#3 Facilities Questionnaire

B. Geology

1 Boring ~21.5 ft. deep - showed silty clay underlain by fine sand at ~16 ft. Average soil void ratio 0.25 (see Attachment #5).

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Log
#5 Emcon findings

Hydrogeology

Only 1 MW 21.5 ft. Groundwater (GW) at 15 ft (see Attachment #4).

Only one aquifer layer defined - depth range estimated by Emcon to be 16-26 ft. below grade (see Attachment #5).

No information on GW gradient, direction of flow, oe velocity in file.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: Toluene, MEK detected in soil. Only Toluene tested for in GW (<5 ppb).

Soil contamination - 5 chemicals. Major contaminants:

Toluene	9,800 ppb
MEK	900 ppb

GW contamination - only Toluene tested for in GW. Results: <5 ppb.

Soils underneath tanks sampled when tanks excavated (8/83). Toluene at 9800 ppb found - CCA contends that contamination resulted from an isolated one-time spill of a small volume of TOL from a feed pipe as it was being removed.

Downgradient facilities: Technical Coatings, Monsanto, PMI, Fairchild
Upgradient facilities: Memorex
No contamination seems to have migrated onsite or offsite (determination by MCT).

Attachments:	#6	Lab Results	8/15/83
	#7	" "	9/20/83
	#7	CCA letter	8/24/83

D. Case Chronology

Leak Detection Program 1982

12/2/82	Facilities Questionnaire received by RWQCB
8/1/83	CCA informs RWQCB that Chemical Waste Management would do removal of tanks and EAL Corp. would do sampling.
8/26/83	EAL Corp. soil analysis recieved by RWQCB. Findings: No contamination except for one sample showing 590 ppb of Toluene under Tank #7 (see Attachment #2 for location).
9/7/83	RWQCB requires further investigation (Attachment #9).
9/8/83	MRK completes chemical leak form, contacts appropriate agencies (Attachment #10).
11/16/83	RWQCB received EAL lab results of sampling done 9/13/83. Findings: Higher levels of contamination (see above) than earlier analysis (Attachment #7). Emcon believes contamination from one-time spill (Attachment #10).
11/17/83	MRK agrees with Emcon that contamination was from spillage.
1/6/84	Emcon Associates report received by RWQCB. Findings: worst case calculations by Emcon show minor spill with minimal impact on associated GW.
2/2/84	RWQCB determines no further investigation required but sampling from monitoring well required every 6 months. (Attachment #11).

Attachments: #9 RWQCB letter 9/7/83
#10 Emcon letter 10/25/83
#11 Chemical Leak Summary 9/8/83
#12 RWQCB letter 2/2/84

Current Status(as of 9/19/84)
N/A but semiannual monitoring for GW contamination required (TOL, Benzene, Ethylbenzene, o-XYL, MEK at detection limits of 1 ppb).

F. References
1. EAL Corp. Phase I report 8/23/83
2. EAL Corp. Phase II report 9/20/83
3. Emcon Associates report 12/22/83
Misc. Correspondence

Kaiser Aluminum & Chemical Corporation Site #: NA 18
23333 Stevens Creek Blvd, Cupertino 95014 File Name:Kaiser

Facility: 3 Bldgs
Date Reviewed: 9/20/84 Reviewer: LK

A. Description of Site

No info re: length of occupancy; operations on site; previous use of site.

2 12,000 gal underground non-vaulted nonwaste storage tanks; stored kerosene.
1 12,000 gal underground non-vaulted waste storage tank; stored paint sludge.
EMCON report 4/13/84 notes this tank = 25,000 gal capacity.
All 3 tanks installed 1956, taken out of service 1979; tank bottom 10 ft.
No corrosion protection on any tanks.

Chemicals stored: Low odor kerosene (Butyl stearate, Oleic acid, BHT, Lauric alcohol); 80% kerosene, 19% waste oil, 1% paint.

Attachments: #1 - Site Location Map, 2 pgs
#2 - Facility Map
#3 - Facility Questionnaire, 6 pgs
#4 - EMCON Tank Information

B. Geology

2 exploratory boreholes on project site.
Penetrated gravelly shales of Santa Clara Formation, and serpentinitized rocks of Franciscan Formation.
Boreholes terminated upon auger refusal in bedrock at 30 & 40 ft.

Previous exploration by EMCON for Kaiser in Bryan Canyon, 1 mile South of Project area, for proposed landfill:
1977 - 6 borings, 20-40 ft deep = dry
1983 - limited GW encountered.

Soil Classification per Risk Assessment Question #11.

Attachments: #5 - Historical Soil Exploration Map
#6 - Boring Logs/Key, 3 pgs
#7 - Site Conditions, 3 pgs

Hydrogeology

No GW encountered in borings.
SCVWD notes neither bedrock formation in project area contains useable GW quantities; yield = <1 gpm.

Permeability values in Santa Clara Formation =
0 .00001 to 0.00000001 cm/sec.

Attachments: - Hydrogeologic Information
See Attachment #7 as above

C. Contamination

See Risk Assessment Chemical Properties Question #1,2,3,4.

Total chemicals detected in soil = 2 no GW encountered

Soil: B-1, adjacent to paint sludge storage tank, EPA 624/625 =

Toluene	150 ppb	34-35.5 ft
Hydrocarbon mixture C-12 to C-20	250,000 ppb	5-6.5 ft

B-2, adjacent to kerosene storage tank, EPA 625 = ND.

EMCON proposal report 12/7/83 notes Retaining Wall for paint sludge storage tanks failed.

3 industrial wells within 1 mile of project area; 2 with maximum depth = 70 ft; obtain GW from base of terrace deposits perched on top of bedrock; used as irrigation wells.

Attachments: #8 - Site Contamination Map
#9 - Soil Data, 2 pgs
#10 - Retaining Wall Failure Note
#11 - Industrial Wells Information

D. Case Chronology

5/26/82	Facility Questionnaire completed for Leak Detection Program
6/82	DOHS inspection.
11/8/83	Kaiser letter to DOHS planned abandonment of all 3 tanks
11/23/83	Leak Detection Investigation letter sent to Kaiser.
4/13/84	Phase I Subsurface Investigation by EMCON Findings - no GW encountered soil = 2 contaminants
7/84	SCVWD to evaluate if facility in recharge zone

Attachments: #12 - DOHS Inspection Letter, 2 pgs
#13 - Kaiser Correspondence re: Tanks
#14 - RWQCB Correspondence to Kaiser

E. Current Status

9/84 Facility not in recharge zone.
No further investigation required for site per RWQCB.

F. References

1. EMCON report 12/7/83 (Attachment #10).
2. EMCON report 4/13/84 (Attachment #4).
3. EMCON report 5/29/84 (Attachment #11).
4. Facility Questionnaire (Attachment #3).

U.S. Cellulose Co.
520 Parrot St, San Jose 95112

Site #: NA 19
File Name:USCELL

Facility: 2 Bldgs
Date Reviewed: 7/84

Reviewer:LAP/LK

A. Description of Site

No info re: previous use of site, length of occupancy, operations on site.

14 underground non-vaulted nonwaste storage tanks; installed 5/80; 1,000 - 10,000 gal capacities; deepest tank bottom 11 ft below grade.

Chemicals on site: Toluene, Xylene, Acetone, Isopropyl alcohol (IPA), Methanol, n-Butyl alcohol, Methyl ethyl ketone (MEK), Naptha, Lacquer thinner blends 3, A-80, 4; Paint thinner, ethanol.

1,1,1-TCA never used, stored, transferred or associated with facility.

Coyote Creek located 0.5 miles NE of facility;
Underground storage tanks located on NE side of warehouse/operations bldg.

Attachments: #1 - Site Location Map 2 pgs
#2 - Facility Questionnaire/Information 8 pgs

B. Geology

2 Borings for monitoring wells. Soils on site = silty clay, sandy silt, and sand and gravel.

Missing Boring Log #2.

Soil classification per Risk Assessment Question # 11.

Attachment: #3 - Boring Log 4 pgs

Hydrogeology

2 GW monitoring wells (MW). 1 aquifer sampled.
Shallowest GW = 8 ft at MW-1.
GW flow direction for facility = N-NE
(downgradient facilities Burke, Lorentz Barrel & Drum flow direction = NW)
GW gradient not determined.

Attachment: #4 - Hydrogeology Information

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected: GW = 3 soil = 0

Initial soil/GW analysis 4/83 showed only 1 contaminant, IPA, at 38 ppb in MW-!; MW-1 located within 2 ft of IPA storage tank. Facility suspected accidental spillage, not tank leak. Tank emptied of IPA; ethanol stored instead.

Resampled GW 9/83 = IPA 72 ppb, ethanol not detected. RWQCB concurred with facility hypothesis re: spillage not leak.

Spill of Lacquer blend A-80 due to overfilling tank occurred 2/84.

Semiannual GW sampling 5/84 = IPA not detected; both MWs contaminated with 1,1,1-TCA and Acetone. TCA not stored on site.

Attachments:	#5 - RWQCB Contamination Map	
	#6 - Soil/GW Data 6/83	4 pgs
	#7 - GW Resample Data/RWQCB Conclusion	2 pgs
	#8 - Spill Information	3 pgs
	#9 - GW Semiannual Data 5/84	4 pgs

D. Case Chronology

5/82 Facility Questionnaire completed
6/83 Phase I subsurface investigation by Anatec Lab
 Findings - GW, 1 contaminant
 soil, no contamination
9/83 GW resampled
11/83 RWQCB memo concurred GW contamination due to spillage
 RWQCB correspondence re:no further investigation warranted
 Semiannual GW analysis requested
2/84 Spill on site while filling tank
5/84 GW semiannual anaylsis =
 2 new contaminants detected, 1 not stored on site

E. Current Status

11/83 Facility given NA status; no further investigation warranted.
 Semiannual GW monitoring requested
5/84 Semiannual GW sampling completed
 (Attachment # 9)

Attachment: #10 - RWQCB Correspondence re: Status

F. References

1. Anatec Lab report 6/83; Correspondence as above.

WATKINS-JOHNSON CO.
3333 Hillview Ave
Stanford Industrial Park
Palo Alto, CA 94304

Site #: NA 21
File Name: WJ

Reviewed 4/19/85

Reviewer: MCT

A. Description of Site

No information on operations, length of occupancy, prior occupants or use in file.

No facilities questionnaire in file.

TCE used in limited quantities, no exceeding 20 ml/week. Tetrachloroethylene not used at all (Watkins-Johnson letter 2/25/83).

Attachments: #1 Site Maps

B. Geology

Shallow soils consist of clays interbedded with sands and gravels. Near the center portion of the property soils are more sandy (4).

Site area underlain to depths of greater than 450 ft. by clays and clayey sands and gravels of moderately low permeability (1).

5 borings; deepest 47 ft. (Only one boring log attached - others confidential DWR Water Well Drillers Logs).

Soil classification per Risk Assessment Question #11.

Attachments: #2 Boring Logs
#3 Geologic Profiles

Hydrogeology

Groundwater (GW) encountered at 18.3 ft (1). GW flows east to northeast (4). GW gradient calculated by MCT to range from 0.6 to 1.8% with an average of 0.9% across the site (MW1-MW5).

5 Monitoring Wells (MW); deepest 47 ft.
Permeable layer appears to be discontinuous (4).

Attachments: #4 GW Contour Map

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site - TCE detected in GW.

Soil contamination - 6 chemicals detected, 4 quantified. Major contaminants:

Toluene	16 ppb
1,2-Dichloroethylene	1 ppb

GW contamination - 9 chemicals. Major contaminants:

TCE	2,600 ppb
Freon 12	260 ppb (estimated)

Highest GW contaminant concentrations located on west edge of property where GW enters from offsite. Site given N/A status because of earlier determination that contamination was from an offsite source.

Attachments: #5 Lab Results
#6 RWQCB GW contamination map

Case Chronology

Leak Detection Program 1982

6/15/82	Phase I report by Emcon Associates submitted as precursor to Mandatory Facility Questionnaire. Findings: Low levels (<10 ppb generally) of soil and GW contamination.
8/18/82	AWO memo states contaminant levels found do not indicate a leak but that additional monitoring advised to assure this is not the front of a contaminant plume.
8/26/82	RWQCB letter states no further investigation necessary (Attachment #7).
2/25/83	GW Sampling results by Watkins-Johnson submitted - two chemicals detected (TCE, PCE) at low levels.
6/5/84	Emcon letter to Watkins-Johnson with new sampling results received - continued low levels of contamination.
6/14/84	Safety Specialists letter to Watkins-Johnson with new sampling results with increase levels of contamination (up to 215 ppb of 1,1-DCE).
10/30/84	Subsurface investigation report by Safety Specialists received. Findings: levels of contaminants increasing - appears as if contamination is migrating from offsite.

Attachments: #7 RWQCB letter 8/26/82

E. Current Status (As of 4/19/85)

N/A.

F. References

1. Emcon report 6/82
2. Emcon sampling results 2/83
3. Safety Specialists sampling results 6/84
4. " " " " 10/84

DYSAN CORPORATION
5301 Patrick Henry Drive
Santa Clara, CA 95050

Site #: NA 22; OG 18,19
File Name: Dysan-C

Facilities: 5200 Patrick Henry Drive (OG 19)
5301 Patrick Henry Drive (NA 22)
5440 Patrick Henry Drive (OG 18)

Date Reviewed: 10/4/84

Reviewer: MCT

<NOTE: On attachments use following key: * - in comprehensive packet as well as individual facility files, ** - in individual facility files only, *** - in comprehensive packet only.>

A. Description of Site

Manufacturer of computer disks. No information on length of occupancy, prior occupants or use in file.

Facility Questionnaire data:

5200 Patrick Henry Drive
- 5 non-vaulted non-waste storage tanks. 2 tanks contain #2 fuel oil; 1 tank contains Methyl Ethyl Ketone (MEK); 2 tanks never put in service (c).
- 1 non-vaulted MEK waste storage tank.

Fuel tanks and solvent tanks in separate areas on site.

5301 Patrick Henry Drive
- 6 non-vaulted non-waste storage tanks. 2 tanks contain #2 fuel oil; 4 tanks never put into service (c).
- 1 non-vaulted waste storage tank never put into service (c).

5440 Patrick Henry Drive
- 3 non-vaulted non-waste storage tanks containing #2 fuel oil and MEK.
- 1 non-vaulted MEK waste storage tank.

Calabazas Creek runs adjacent to bldgs. 5440 and 5200.

Attachments: #1 Site Location Map*
#2 Site Location Map*
#3 Site Map (with Monitoring Well locations)*
#4 Facilities Questionnaires**

B. Geology

Soil Profile predominantly silty clays with some sand and gravel lenses. Only substantial layer of other material in Boring #12 (5440 Patrick Henry Drive) - 0-25 ft. sand.

Number of Borings:
5200 - 21 Borings; deepest 40 ft.
5301 - 8 Borings; deepest 23 ft.
5440 - 18 Borings; deepest 40 ft.
For locations, see Attachment #3.

Soil classification per Risk Assessment Question #11.

Attachments: #5 Boring Logs**

Hydrogeology

One aquifer layer defined. No deep aquifer within 40 ft. depth (3).

Average groundwater (GW) gradients in the area of the 5440 tanks approximately 0.003 ft/ft, and near the 5200 tanks approximately 0.002 ft/ft (2); creek and GW determined to be tidal (5). Direction of GW flow north (2). No information on GW velocity in file.

Shallowest GW: Bldg. 5200 - 5.78 ft.
" 5301 -~7.0 ft.
" 5440 - 6.77 ft.

All borings converted to monitoring wells (MW) - see Geology section for distribution and Attachment #6 for summary of well data.

Attachments: #6 Monitoring Well data summary***
#7 GW contour maps**

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: MEK, cyclohexanone found in GW and soil at Bldg. 5440; MEK only in GW and soil at Bldg. 5200.

No chemicals tested besides MEK, Cellosolve (2-ethoxy ethanol), IPA, and Cyclohexanone.

Soil Contamination:
Bldg. 5200 - 1 chemical: MEK at 0.1 ppm.
Bldg. 5301 - no soil analysis
Bldg. 5440 - 4 chemicals: Major contaminants MEK (200 ppm) and IPA (0.6 ppm).
No soil contamination >10 ft by Bldg. 5200, >20 ft by Bldg. 5440 (3).
GW contamination:
Bldg. 5200 - 4 chemicals: major contaminants MEK (24,300 ppm) and Isopropyl Alchohol (IPA) (45 ppm).
Bldg. 5301 - 1 chemical: IPA (10 ppm).
Bldg. 5440 - 6 chemicals: major contaminants MEK (49,000 ppm) and Cellosolve (1,200 ppm).

High MEK contamination (among others) around Bldgs. 5200 & 5440. Source of contamination at first assumed to be solvent leaks from tanks on Dysan property in area of 5440 & 5200 tanks (RJC memo 5/20/83). Source of contamination later determined to be result of spills at the fill ports at the top of each tank. Also, the seal on the tank gauge is composed of an incompatible material to MEK - this caused the seal to deteriorate, leading to a tank overflow. System currently not in use; tanks emptied and cleaned and waste disposed of in 55 gal. drums. (Attachment #12) Little contamination in area of Bldg. 5301.

Levee wells show no contamination - therefore contamination has not spread under Calabazas Creek (2).

Pump test report showed that extraction wells were effective in containing and removing plume (Memo, RJC 11/83). Plan to pump 3 wells at a rate of 50 gpm. Two are installed, one more is to be done when old tank removed and new vaulted tanks put in. Contamination decreased during pump test 10-50% (see Pump Test Report - Fig. 10-19 and Fig. 20-30 for bldgs. 5440 and 5200, respectively). Area of influence of the recovery wells approximately 100 ft. radius from the wells. (4)

Intersil facility east of Dysan - no overlap of contaminants.

Attachments: #8 Lab Results*
#9 RWQCB plume maps**

D. Case Chronology

<NOTE: For a more detailed case chronology from 6/28/84 - 11/8/83, see Attachment #10>

Leak detection program 1982.

6/23/82 Facilities Questionnaires completed.
8/3/82 Phase I subsurface investigation by IT Enviroscience recieved by RWQCB. 24 Borings/MWs (8 at Bldg. 5301, 6 at Bldg. 5440, and 10 at Bldg. 5200). Findings: GW contamination detected (no soil analysis performed).
8/30/82 Phase IA subsurface investigation completed by IT Enviroscience. Additional Borings/MWs constructed at Bldg. 5440 (six) and Bldg. 5200 (five). Findings: Contamination had not spread >60 ft. to the north and 30 ft. to the south of either tank farm.
10/5/82 SWQCB complains of methods used in Dysan investigation.
10/27/82 IT proposal for defining vertical extent of contamination received by RWQCB.
3/1/83 Report on vertical extent of contamination completed by IT. 2 additional borings, one at each contaminated tank farm dug to 40 ft. - sampling from 10-40 ft. at 5 ft. intervals. Findings: no soil contamination >10 ft. by Bldg. 5200 or >20 ft. by Bldg. 5440.
10/13/83 Pump Test report by IT Enviroscience received by RWQCB.
7/9/84 Case transferred from RKM to RWM.

7/13/84	RKM Phase II Tracking System report notes that 10/12/82 SWQCB memo on 10/6/82 meeting states "the spill point probably was the fill port @ top of each tank". It also notes that all tanks at this time have been taken out of service and cleaned (tanks at Bldg. 5301 have never been put in use).
8/13/84	RWQCB letter delineates mitigation plan.
9/24/84	Dysan letter includes time schedule for implementation of mitigation plan. Dysan has also changed consultants (to McLaren Associates).

Attachments: #10 Case Chronology 6/28/82-11/8/83***
#11 RKM Phase II update 7/13/84***
#12 RWM memo 7/19/84***
#13 RWQCB letter 8/13/84***
#14 Tank Farm clean-up schedule 9/24/84***

__E. Current Status__ (as of 10/4/84)
See Attachment #14.

__References__

1. IT Enviroscience Phase I report 7/9/82
2. IT Enviroscience Phase IA report 8/30/82
3. IT Enviroscience report on vertical extent of contamination 3/1/83
4. IT Enviroscience Pump Test report 9/14/83
5. RWQCB Phase II Tracking System report 7/13/84
Misc. Correspondence

LSI Logic Corporation Site #: NA 23
1601 McCarthy Blvd, Milpitas 95035 File Name: LSI

Facility: 1 Bldg
Date Reviewed: 7-5-84 Reviewer: LK

A. Description of Site

LSI first occupant of site; leases both the land and the Bldg. Facility manufactures integrated circuits.

Previous use of site not specified; property surrounding LSI on 3 sides used for commercial & industrial purposes; 4th side (SW) used for agricultural purposes, with Coyote Creek inbetween.

1 1100 gal underground vaulted HF acid waste storage tank; installed 1981.
1 500 gal non-vaulted solvent waste storage tank; installed 1981; 8 ft to tank invert.
2 vaulted acid waste treatment units installed 1981.

Chemicals on site reported as "typical" tank contents: IPA, Acetone, Methanol, HF, Ammonium Fluoride, 6:1 Buffered Oxide Etch.

Attachments: #1 - Site Location Map
#2 - Facility Map
#3 - Site Information, 2 pgs
#4 - Facility Questionnaire, 6 pgs
#5 - RWQCB Correspondence re: Investigation Required

B. Geology

1978 8 borings done by Whaler Associates on narrow strip of agricultural land SW side of facility; borings 30-67 ft deep showed sandy silt to 14 ft, plastic clay to ~24 ft, and underlain mixture of coarse grained sands & gravels with thin lenses of silts and clays.

4/83 Boring on site for subsurface investigation to 36 ft depth.

Soil classification per Risk Assessment Question # 11.

Attachment #6 - Boring Log/Key, 3 pgs
#7 - 1978 Boring Information, 2 pgs

Hydrogeology

1 Monitoring Well (MW).

Two aquifers in site area:
shallow = 0-50 ft, and at extreme, 200 ft.
deep = 200 ft to bedrock

Shallowest GW = static GW at 7 ft; samples taken at 10-11.5 ft.
GW flow direction is NW, but may be distorted by proximity of Coyote Creek 200-400 ft West of site.
Gradient not given; raw data not given to calculate.
GW conductivity = 2900 umhos/cm; soil conductivity = 320 umhos/cm

Site in area of saltwater intrusion into upper aquifer.

Evidence of mobile free water during drilling from depth of 14 ft down suggests clay layer not reliable aquitard, may allow hydraulic communication.

City of Milpitas maintains a well 400 ft West of tank; well screened in the deeper aquifer.
Two other wells at greater distance to South and East of LSI site, not connected to city water system; maintained for emergency purposes.

Attachment: #7 - as above
#8 - Hydrogeologic Data

C. Contamination

See Risk Assessment Chemical Properties Questions 1,2,3,4.

Only 1 chemical detected per EPA 624 scan
Freon-113 ppb: GW = 30 soil = 145

Freon not one of specified chemicals on site.

Attachment: #9 - Contamination Map/Data, 3 pgs

D. Case Chronology

8/31/82	Facility Questionnaire completed for Leak Detection Program
6/83	Phase I Subsurface Investigation by Wahler Associates Findings - 1 chemical in soil & GW

E. Current Status

6/83 RWQCB memo resample and submit results in 6 months.
1984 GW analysis not located.

Attachment: #10 - RWQCB Memo re: Status

F. References

1. Wahler Associates report 6/83.
2. Facility Questionnaire (Attachment #4).

HEWLETT-PACKARD
Microwave Semiconductor Division
350 West Trimble Rd., San Jose

Site #: NA 25
File Name: HP-5J

Reviewed 7/84, 10/84;1/85

Reviewer:LAP/MCT

A. Description of Site

The site occupies approximately 175 acres. No information on operations, length of occupancy, prior occupants or use in file.

The facility maintains 2 vaulted storage tanks containing fuel oil and 1 non-vaulted gasoline storage tank. 1 non-vaulted waste solvent tank was excavated and removed 4/84. This tank had contained the following chemicals:

Isopropyl Alcohol	1,1,1-Trichloroethane
Acetone	Trichloroethylene
Methyl Alcohol	Butyl Acetate
Methylene Chloride	Xylene
Oil	

See Attachment #2 for more information.

Attachments: #1 Site Maps
#2 Facilities Questionnaire

B. Geology

Site soils consists mainly of continuous and discontinuous interbeds of fine-grained sand, silt, clay and organic-rich clay (1).

17 Borings (2 by Applied Earth Consultants and 15 by Cooper & Clark); deepest 28.3 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs
#4 Geologic Cross-Sections

Hydrogeology

No monitoring wells were installed on site so little hydrogeologic data is available. Water samples tested from sub-basement drainage collecter well sumps in both Buildings 90 & 91.

Regional groundwater flow is NW.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: Methylene Chloride, TCE detected in soil; 1,1,1-TCA, TCE detected in sump water.

Soil contamination - 3 chemicals. Major contaminants:

TCE	4 ppb
Phthalate	2 ppb

Sump water contamination - 4 chemicals. Major contaminants:

1,1,1-TCA	11.6 ppb
TCE	1.3 ppb

Facilities in area: Van Waters & Rogers, IMP, San Jose Graphics.

Attachments: #5 Lab Results - Applied Earth Consultants 4/84
#6 " " - HP Environmental Lab 7/84
#7 " " - Analytical Technologies 9/84

D. Case Chronology

Leak Detection Program 1982

6/3/82	Facilities Questionnaire received by RWQCB
2/15/84	Proposal for subsurface investigation by Applied Earth Consultants received by RWQCB.
4/12/84	Subsurface investigation by Applied Earth Consultants completed. Two borings; deepest 3 ft. Results: slight soil and sump water contamination.
7/13/84	Resampling results of sump water by HP Environmental Labs received by RWQCB. No detection but detection limits for TCA were 10 ppb and for TCE 5 ppb.
9/5/84	Because of concern over discharge of basement drainage water into the San Jose storm drain HP requested to resample again using EPA method 601 and sending it to an independent lab. Results by Analytical Technologies showed slight sump water contamination.
11/9/84	RWQCB concludes that HP discharge does not require an NPDES permit.

Attachments: #8 RWQCB letter 11/9/84

E. Current Status (as of 1/25/85)

N/A

F. References

1. Subsurface investigation by Applied Earth Consultants 4/84
2. Sump water analysis by HP Environmental Lab 7/84
3. " " " by Analytical Technologies 9/84

Harris Microwave Semiconductor Site #: NA 26
1530 McCarthy Blvd, Milpitas 95035 File Name: HarrisM

Facility: 1 Bldg
Date Reviewed: 7-5-84;6/85 Reviewer: LK

A. Description of Site

No information re: operations on site, length of occupancy, previous use of site.

- 1 1000 gal underground non-vaulted waste solvent storage tank; installed 1981; removed 10/83
- 5 vaulted underground acid neutralization tank; installed 1981; 5000gpd.
- 1 HF acid collection tank;installed 1981; vaulted; never activated; tank and piping removed 9/83

5/85 EMCON notes new double-walled waste solvent tank installed per Ordinance No. 217.1, Milpitas Municipal Code, Title V,Ch302.

Chemicals on site: Acetone, Isopropyl alcohol (IPA), Trichloroethane (TCA), "developer"- unspecified;
acid treatment units: "various dilute acid" - unspecified, Sodium hydroxide, Hydroflouric acid.

Facility Questionnaire refers to Drawings P-I, MS-I, GS-I; size ~3'x2', not reduceable; originals in RWQCB file.

Attachments: #1 - Site Location Maps, 2 pgs
#2 - Facility Map
#3 - Facility Questionnaire (minus drawings), 7 pgs

B. Geology

1 Boring

Sediments at boring characterized by superficial layer of silty clay with random thin sand lenses to depth of 16', underlain by very fine sand to 36'.

Soil classification per Risk Assessment Question # 11.

Attachment: #4 - Boring Log, 1 pg

Hydrogeology

1 Monitoring Well (MW); 1 Aquifer identified.

Shallowest GW = Static GW at 16 ft; Samples taken at 16.5 ft.
GW flow direction is NW.
Gradient = .28-.47 % (15-25 ft/mile) EMCON 5/85 letter

C. Contamination

See Risk Assessment Chemical Properties Question # 1,2,3,4.

Total chemicals detected in GW = 1 soil = 3.

GW: Chloroform detected in first GW sample 1/83 = 1.6 ppb;
not detected in soil;less detection limit 2nd GW sample 4/83.
Chloroform not included as contaminant in ranking scales 20, 23.

Neighboring company LSI Logic upgradient from Harris Microwave;
Chemicals specified on LSI site = IPA, Acetone, Methanol.
GW contamination at LSI = Freon-113.

Soil: Of chemicals specified on site, IPA & Acetone detected at
4400 & 71 ppb respectively, 14-15.5 ft.
Also detected in soil: Dichloromethane 630 ppb.
Facility Questionnaire notes gravity trenches for waste solvents into tank.

3/2/83 RWQCB correspondence notes "tank investigated has leaked", causing soil contamination.

10/83 Tank excavated. Soil samples after excavation = no detection; detection limit = 500 ppb.

Attachments: #5 - Site Contamination Map
#6 - Soil/GW Data Harris Microwave, 3 pgs
#7 - LSI Logic Chemicals On Site
#8 - RWQCB Correspondence re: Tank Leak
#9 - Tank Excavation Map/Data, 2 pgs

D. Case Chronology

5/10/82	Facility Questionnaire completed for Leak Detection Program
1/18/83	Phase I Subsurface Investigation by EMCON Findings - soil and GW contamination
11/27/83	Phase II Soil Sampling for Tank Excavation by EMCON Findings - Tank excavated 10/83 Soil resampled after excavation = no detection

E. Current Status

11/83	RWQCB required no additional investigation at this time; Semiannual GW monitoring required
3/84	GW analysis data for Acetone, IPA, Dichloromethane all less detection limit.
10/84	GW analysis for Acetone, IPA, Dichloromethane = ND

Attachments: #10 - RWQCB Correspondence re:Status
#11 - GW Data 3/84, 10/84 2 pgs

F. References

1. EMCON letter report 1-18-83, 2 pgs.
2. EMCON letter report 11-17-83, 2 pgs.
3. RWQCB correspondence (Attachment #8, 10).
4. Facility Questionnaire (Attachment #3).
5. EMCON 5/85 response to Facility Summary.

DAP Inc.
520 Marburg Way, San Jose 95133

Site #: NA 27
File Name: DAPinc

Facility: 1 Bldg
Date Reviewed: 7-6-84

Reviewer: LK

A. Description of Site

Facility built 1963; manufactures variety of caulking and glazing compounds.
Previous use of site was agricultural.

12 underground solvent non-waste tanks, installed 1964; capacity 1,500-10,000 gal; tank bottom 10.5 ft below grade.
1 500 gal underground fuel tank.

Chemicals on site: MEK, Acetone, IPA, Linseed oil, Castor oil, Textile Spirits, Mineral Spirits, Cellulose solution (not specified), Wood dough solvents (not specified).

Attachments: #1 - Site Location Map
#2 - Facility Map
#3 - Facility Questionnaire, 6 pgs
#4 - Site Information

B. Geology

Soils uniform plastic silty clays, small discontinuous gravel lenses and fine sands.

Soil Classification per Risk Assessment Question # 11.

Attachment: #5 - Boring Logs, 5 pgs

Hydrogeology

No well aquifer defined. 5 Monitoring Wells to depth 32 ft.

Shallowest GW is 4.2 ft (MW-3).
GW flow direction for MW1-4 near tank farm area is NW toward a shallow topographic depression by railroad;
GW flow direction for MW-5 is S towards Miguelitta Creek.
Gradient not given; data not given to calculate.

Attachment: #6 - Hydrogeologic Data, 2 pgs

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals in GW = >10 soil = not analyzed
Highest contaminant detected = on-site chemical
Mineral Spirits 790 ppb MW-1
Major contaminant all 5 wells =
Methylene Chloride 320 ppb MW-5

On-site chemical Acetone also detected = 20 ppb MW-3 5/83 Report, but on-site chemicals not analyzed for in 4/84 Report.

Dicrepancies between McKesson and Acurex Labs re: Methylene chloride, Bis (2-ethylhexyl) phthalate, and Hydrocarbons noted, suggesting sampling contamination.

Neighboring company Economics Lab located N of DAP; GW flow NW; no GW contamination detected at Economics Lab (2 soil chemicals).

Attachments: #7 - RWQCB Plume Map, Methylene Chloride
#8 - GW Data, 5/83 Report 4 pgs
#9 - GW Data, 4/84 Report 10 pgs

D. Case Chronology

6/7/82	Facility Questionnaire completed for Leak Detection Program
5/83	Phase I Subsurface Investigation by J.H.Kleinfelder Findings - soil not analyzed GW contamination >10
4/84	Phase II Expanded Investigation by J.H.Kleinfelder Findings - soil not analyzed GW major contaminant = Methylene chloride

E. Current Status

6/84 Semi-annual GW sampling per RWQCB

Attachment: #10 - Correspondence re: Status, 2 pgs

F. References

1. J.H.Kleinfelder & Associates Report, 5/83
2. J.H.Kleinfelder & Associates Report, 4/84
3. Facility Questionnaire (Attachment #3).

SCIENTIFIC GAS PRODUCTS
3395 De La Cruz Blvd.
Santa Clara, CA 95050

Site #: NA 28
File Name: SGP

Reviewed 4/18/85

Reviewer: MCT

A. Description of Site

Scientific Gas Products (SGP) owned by Ashland Chemical Co.

Site has served as both a formulation and distribution center of compressed gases since 1973. Facility originally operated under the name of Prescision Gas until 1977 when the name was changed to Scientific Gas Products (1).

Until 6/81 SGP used a 2 ft. diameter, 16 ft. deep gravel filled well to discharge wastes which were generated when returned cylinders were emptied of residual gases by bubbling the gas through water (1).

No facilities questionnaire in file. TCA only chemical identified as used on site (Attachment #12).

Attachments: #1 Site Maps

B. Geology

Soil Profile described by consultants:

0-5 ft.	Black Silty Clay
5-15 ft.	Light Brown Silt (Saturated at ~10 ft.)
15-19 ft.	Blue Stiff Silty Clay
19-32 ft. (BOH)	Stiff Black Clay with small discontinuous sand lenses

7 Borings; deepest 31.5 ft (1).

Soil classification per Risk Assessment Question #11.

Attachments: #2 Boring Logs

Hydrogeology

Only one monitoring well (to 31.5 ft.) so little hydrogeologic data available. Shallowest groundwater (GW) ~10 ft (1).

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals used on site: TCA detected in GW.

Soil contamination - no VOCs detected in soil (detection limit 0.2 ppm).

GW contamination - 3 chemicals:

TCA	9 ppb
Ether	5 "
Methylene Chloride	1 "

Site given N/A status (Attachment #13) but soil removal still required for non-volatile contamination.

Attachments: #3 Lab Results

D. Case Chronology

1/19/82	RWQCB compliance monitoring reports for SGP for violations having to do with disposal well on site (Attachment #4).
5/3/84	SRR memo. Renewal of case investigation when Phil Trautman, a realtor with interest in SGP site, learned from Bob Campbell (Hazardous Waste Specialist with City of Santa Clara) that JDL inspected site in 1981. He wondered if site had a clean bill of health from RWQCB (Attachment #5).
5/15/84	PWJ memo requests followup on SGP case.
5/21/84	Bill Notz letter (owner of property) to SGP asking them to satisfy requirements of RWQCB before termination of lease 6/30/84.
5/24/84	TJB memo - Bill Notz notified that soil sampling is required (Attachment #6).
6/4/84	RWQCB requires MW next to disposal well (Attachment #7).
6/12/84	SCVWD letter delays destruction of well onsite until after RWQCB investigation is completed (Attachment #8).
9/7/84	Phase I report by J.H. Kleinfelder & Assocciates received. 6 borings/1 MW. Findings: Some non-rganic contamination but VOCs not tested for.
10/18/84	RWQCB letter reviews Phase I report, requests additional investigation (Attachment #9).
10/31/84	RWQCB letter to Alhambra Water Co. (facility adjacent to SGP) informing them of investigation.
11/20/84	RWQCB summarizes 11/14 meeting (Attachment #10).
11/28/84	PCM memo - cleanup prescribed in RWQCB 11/20/84 letter will be postponed pending organic sampling results.
1/18/85	J.H. Kleinfelder analytical results for organics. Findings: TCA, Ether, Methylene Chloride detected at low ppb range (<10 ppb).

2/7/85	RWQCB requires soil sampling based on detection of VOCs in 1/18/85 report (Attachment #11).
2/14/85	PCM memo confirms use of TCA on site as paint thinner (Attachment #12).
3/1/85	J.H. Kleinfelder analytical results for organics in soil & GW submitted. Findings: ND in soil (detection limit 0.2 ppm), TCA (7 ppb) detected in GW.
3/6/85	RWQCB grants N/A status (Attachment #13).
3/29/85	RWQCB letter approves soil removal plan (Attachment #14).

Attachments:		
	#4	Compliance Monitoring Reports (6/81,1/82)
	#5	SRR memo 5/3/84
	#6	TJB memo 5/24/84
	#7	RWQCB letter 6/4/84
	#8	SCVWD letter 6/12/84
	#9	RWQCB letter 10/18/84
	#10	" " 11/20/84
	#11	" " 2/7/85
	#12	PCM memo 2/14/85
	#13	RWQCB letter 3/6/85
	#14	" " 3/29/85

E. Current Status (as of 4/18/85)

N/A. Soil removal still required.

F. References

1. Phase I report by J.H. Kleinfelder & Associates 8/84
2. Organic Sampling Results by J.H. Kleinfelder & Associates 2/85

NO CONTAMINATION (NC)

Intersil, Inc.
10900 North Tantau Avenue
Cupertino, CA 95014

Site #: NC 1
File Name: B:INTER-CU

Reviewed 7/13/84, revised 6/17/85

Reviewer:MCT

A. Description of Site

Intersil is a semiconductor device manufacturer. No information on length of occupation, prior occupants or use in file.

Site has 2 - 500 gal scrubber pits and 1 neutralization system consisting of 6 - 500 gal interconnected plastic tanks. The neutralization system was abandoned in 1976.

Chemicals used or stored on site (Attachment #2):

Photoresist	Xylene
712-D Stripper	n-Butyl Acetate
Isopropanol	HMDS
Chromic Acid	Arsenicals

Attachments: #1 Site Maps
#2 UIC Program Questionnaire
#3 Facilities Questionnaire

B. Geology

2 borings to ~35.5 ft. Medium to stiff clays encountered in the borings with a silty clay layer from 13-18 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Logs

Hydrogeology

No monitoring wells constructed so little hydrogeologic information available (no groundwater encountered to BOH).

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

Chemical analysis for soil samples only - no contamination found (detection limit 50 ppb for most chemicals).

No contamination found at AMI well ~1500 ft. from site.

Facilities in vacinity: AMI, Siemens Electronics, Hewlett-Packard, and Four Phase.

Attachments: #5 Lab Results - Intersil
#6 Lab Results - AMI

D. Case Chronology

Leak Detection Program 1982.

5/28/82	Facilities questionnaire recieved.
7/12/82	RWQCB letter asks for verification that low solvent concentrations in sump are representative of past and present materials being treated in order to drop the site to a lower priority (Attachment #7).
8/11/82	Intersil letter received confirming that water samples analyzed were representative of past as well as present materials (Attachment #8).
2/28/83	Phase 1 report by Cooper Engineers submitted. Findings: No GW encountered, no soil contamination detected.
4/28/83	RWQCB letter confirms N/C status.

Attachments: #7 RWQCB letter 7/21/82
#8 Intersil letter 7/30/82
#9 RWQCB letter 4/28/83

E. Current Status (as of 6/17/85)

N/C

F. References

Subsurface Investigation for Possible Leaks in Sumps by Cooper Engineers 2/28/83

Owens-Corning Fiberglass
960 Central Expressway, Santa Clara

Site #: NC 2
File Name: OWENS

Facility: 1 Bldg
Reviewed: 6/84; 1/17/85

Reviewer:LAP/MCT

A. Description of Site

No information on length of occupancy, operations, or prior occupants and uses in file.

Underground tanks on site (Attachment #2):
1 non-vaulted storage tank (unleaded gasoline)
1 " " " " (Stoddard solvent)
1 concrete sump for process wastewater (98% H_2O, 0.5% inorganic solids, 1.5% phenolic resin)

See Attachment #1 for location of facilities upgradient and downgradient from site.

Attachments: #1 Site Location Map
#2 Facilities Questionnaire

B. Geology

Site underlain by interlayered sands and silty clays.

1 boring - 31.5 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Log

Hydrogeology

Shallowest groundwater (GW) at ~15 ft.

Only 1 monitoring well (MW) so little data on GW flow, velocity or gradient.

C. Contamination

Only one chemical tested for (Stoddard solvent) - not detected.

Attachments: #4 Lab Results

D. Case Chronology

Leak Detection Program 1982

5/25/82	Facilities questionnaire received.
10/8/82	Phase I proposal by Emcon received.
1/12/83	Phase I subsurface investigation by Emcon Associates. 1 boring/MW constructed. GW analysis showed no contamination for Stoddard solvent - no other chemical tested.
1/27/83	RWQCB states N/C but requests semiannual monitoring.

Attachments: #5 RWQCB letter 1/27/83

E. Status (as of 1/85)

N/C

F. References

1. Emcon Phase I report 1/83

(NOTE: Spill report filed 7/15/82 incorrectly identified spill on Owens property when it actually occurred on Monsanto property. Workers became ill from inhalation of phenolic vapors during excavation to install leach line (PWJ verbal communication 7/24/84). See Attachment #6.)

Hi Line Paint Mfg. Co., Inc.
500 Salmar Ave, Campbell

Site #: NC 5
File Name: Hi-Line

Reviewed 7/84; 6/18/85

Reviewer:LAP/MCT

A. Description of Site

Hi Line is a manufacturer of paint and has been in operation at this site since 7/74. Harold Grubb is the president of Hi Line Paint and the owner of the property and tanks is Howard Hubbard. No information on previous occupants or use in file.

Chemicals used in production include pigments (titanium dioxide, clay, talc, silica, colors), latex resins, oils, alkyd resins, petroleum solvents (Chevron-1200, Mineral Spirits, Naptha), organic solvents (Xylene, Toluene, paint thinner).

6 solvent storage tanks installed 1970:
- 2 - 6,000 gal tanks store Chevron-1200 and paint thinner,
- 4 - 1,000 gal tanks store Xylene, Mineral Spirits, Toluene, and Naptha

Backfill around the tanks reported to be compacted sand. Access to each tank is through riser pipes in the asphalt. No leaks are known to have occurred during the time the tanks have been in operation.

Hi Line stores raw products and paint sludge outside on a concrete pad area. This area is not bermed and sits roughly 50 yds. from a storm drain. Roughly 300-400 55 gallon drums are stored outdoors.

Attachments: #1 Site Maps
#2 UIC Program Questionnaire
#3 Facilities Questionnaire

B. Geology

Site underlain by deposits of mainly fine-grained sands and silts.

One boring to 45.5 ft. Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Log

Hydrogeology

No groundwater (GW) encountered in boring so little hydrogeologic information available. GW gradient assumed to be less than 1%, flowing to the North.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

Only soil sampled as no GW encountered - no contamination detected (detection limits 25 ppb on 624 scan).

Attachments: #5 Lab Results

D. Case Chronology

9/81	UIC Program Questionnaire submitted.
6/3/82	Facilities Questionnaire received.
8/19/82	Hi Line letter received stating investigation not needed based on priority one criteria.
9/10/82	RWQCB letter stated investigation needed based on priority two criteria.
1/4/83	Hi Line letter received saying company does not have money to do investigation and suggests contacting owner of property.
7/8/83	RWQCB warns Hi Line and owner of property of possible enforcement actions if investigation not performed soon.
7/13/83	DME memo discusses telephone conversation with Mr. Hubbard (owner) saying they will comply with request for investigation.
9/28/83	Phase I report by Applied Earth Consultants submitted. One boring constructed - no GW encountered to 45 ft. Findings: no soil contamination detected.
11/9/83	RWQCB confirms N/C status (Attachment #6).

Attachments: #6 RWQCB letter 11/9/83

E. Current Status (as of 6/18/85)

N/C

F. References

Phase I report by Applied Earth Consultants 9/28/83

IBM
2159 South 10th St, San Jose

Site #: NC 13
File Name:IBM10th

Facility: 1 Bldg
Date Reviewed: 6/84

Reviewer:LAP/LK

A. Description of Site

No information re: operations on site, length of occupancy, previous use of site.

1 500 gal underground non-vaulted solvent storage tank; installed 1965; used for waste Freon and Kerosene.

Chemicals on site: Freon and Kerosene

Facilities in area: Santa Clara County Transit Agency, upgradient; Lorentz Barrel & Drum, downgradient.

Attachments:	#1 - Site Location Map
	#2 - Facility Map
	#3 - Facility Questionnaire 6 pgs

B. Geology

Soils consist of silty clay, and sand and gravel.

Soil classification per Risk Assessment Question #11.

Attachment: #4 - Boring Log Information

Hydrogeology

3 Monitoring Wells.

Hydrogeologic information not given; Aquifer not defined.
Shallowest GW = 20 ft, 2/84 (Boring Log Information)
GW flow direction = assumed NW
GW gradient not given

C. Contamination

See Risk Assessment Chemical Properties Questions # 1,2,3,4.

Total chemicals detected in GW = 0 soil = 0

GW data assumed from Harding Lawson Associates (HLA) report 4/84 shows no detection for Freon-113, TCA, Diesel fuel, and Kerosene.

Attachment: #5 - GW Data/Map 2 pgs

D. Case Chronology

12/83 Facility Questionnaire completed
4/84 Phase I investigation by HLA
    Findings - no contamination detected
    IBM closure plan scheduled excavation of tank

E. Current Status

4/84 IBM plans excavation of tank
6/84 Site shows no contamination

Attachment: #6 - IBM Closure Plan

F. References

Attachments as above.

Tandy Magnetic Media
1600 Memorex Drive, Santa Clara

Site #: NC 9
File Name: Tandy

Facility: 1 Bldg
Date Reviewed: 6/84

Reviewer: LAP/LK

Description of Site

No information re: operations on site, length of occupancy, previous use of site.

1 15,000 gal underground non-vaulted diesel storage tank; installed 1978

Chemicals on site: diesel fuel

Facilities in area: Memorex, upgradient; Pacific Nursery Pots, downgradient.

Attachments:	#1 - Site Location Map	
	#2 - Facility Map	
	#3 - Facility Questionnaire	4 pgs

B. Geology

Soils consist of silty clay and fine sand.

Soil classification per Risk Assessment Question # 11.

Attachment: #4 - Boring Logs 4 pgs

Hydrogeology

2 Monitoring Wells.

Hydrogeologic information not provided; Aquifer not defined.

Shallowest GW = 12 ft, 11/82 (Boring Logs)
GW flow direction = assumed North
Gw gradient not determined.

C. Contamination

See Risk Assessment Chemical Properties Question # 11.

Total chemicals detected in GW = 0 soil = not tested

12/14/82 Harding Lawson Associates (HLA) GW analysis for cyclohexanone, MEK and MIBK.
Results = all less detection limit (50 ppb).

Attachment: #5 - GW Data 3 pgs

D. Case Chronology

12/82 Phase I GW analysis by HLA
Findings - no GW contamination detected
6/83 Facility Questionnaire completed

E. Current Status

6/84 Site showed no contamination

F. References

Attachments as above.

STC Computer Research
3450 Central Expressway, Santa Clara

Site #: NC 16
File Name: STC

Facility: 1 Bldg
Date Reviewed: 7/84

Reviewer:LAP/LK

A. Description of Site

No information re: operations on site, length of occupancy, previous use of site.

1 500 gal underground vaulted waste storage tank; installed 1981; stores hydrofluoric acid reagent
1 550 gal underground non-vaulted waste solvent storage tank; installed 1981
3 1000 gal vaulted treatment tanks

Chemicals on site: Trichlorethylene, Acetone, Isopropanol, Methanol, Methyl isobutyl ketone, Ketone and alcohol mix, HMDS (Hexamethyldisilazane), PBS resist, and PMMA resist.
Acids used: Sulfuric, hydrofluoric, phosphoric, nitric.

Facilities in area: Fairchild SC, upgradient; Signetics 811, downgradient.

Attachments: #1 - Facility Map
#2 - Facility Questionnaire 10 pgs

B. Geology

1 Boring to depth of 30 ft.
Site underlain by shallow groundwater contained in erratic and discontinuous thin sand layers within tight clay sequence. Shallow zone weak; not used as water supply source.

Soil classification per Risk Assessment Question #11.

Attachment: #3 - Boring Log

Hydrogeology

1 Monitoring Well

Aquifer not well defined.
Shallowest GW = 9.5 ft, 5/83
GW flow = NW (per map)
GW gradient not determined.

Attachment: #4 - Hydrogeologic Information 3 pgs

C. Contamination

See Risk Assessment Chemical Properties Question # 1,2,3,4.

Total Chemicals detected in GW = 0 soil = 0

5/83 GW/soil analysis per EPA 624 method = no contamination; detection limit = <1 ppb.

Attachment: #5 - GW/Soil Data 3 pgs

D. Case Chronology

5/82 Facility Questionnaire completed
5/83 Phase I subsurface investigation by Scientific Environmental Lab, Inc.
Findings - no GW/soil contamination

E. Current Status

7/84 Site shows no contamination

F. References

Attachments as above.

TOSHIBA SEMICONDUCTOR (USA), INC.
1220 Midas Way
Sunnyvale, CA 94086

Site #: NC 23
File Name: B:TOSHIBA

Facility: 1 building

Date Reviewed: 9/13/84

Reviewer: MCT

A. Description of Site

No information on current operations, length of occupancy, prior occupants or use in file.

Underground tanks:

1 1000 gal. non-vaulted waste storage tank containing Acetone, Xylene, TCA, N-butyl Acetate, Isopropanol, Photoresist residue, and Aluminum Oxide powder. Installed 1981.

1 vaulted treatment tank for process cleaning and scrubbing acid waste water. Daily volume 126,000 gal/day. Installed 1979.

Attachments: #1 Site Location Map
#2 Site Map
#3 Facilities Questionnaire

B. Geology

Mostly tan silty clays in upper layer of soil, gray plastic clay at 12-16 ft.

2 Borings - deepest 24 ft.

Soil classification per Risk Assessment Question #11

Attachments: #4 Boring Logs

Hydrogeology

2 Monitoring Wells (MW) constructed - deepest 24 ft.

Shallowest GW at 8.4 ft. No information on groundwater (GW) gradient, velocity or direction of flow. Further hydrogeologic information is included in Attachment #5.

Attachment: #5 Hydrogeologic information

C. Contamination

No contamination was found in soil or GW (detection limit 1 ppb)

Attachments: #6 Lab Results 2/1/83

D. Case Chronology

Leak Detection Program 1982

6/1/82	Facilities Questionnaire received by RWQCB.
2/7/83	Phase I subsurface investigation by Scientific Environmental Laboratories received by RWQCB. Findings: No contamination in soil or GW.
2/28/83	RWQCB confirms "no contamination" status.

Attachments: #7 RWQCB letter 2/28/83

E. Current Status (as of 9/13/84)

N/C

F. References

Scientific Environmental Laboratories, Inc. (1/83) report.

Sierra Chemical Company
1001 Yosemite Drive
Milpitas, CA.

Site #: NC 26
File Name: SIERRA

Reviewed 7/9/84;6/85

Reviewer: MCT

A. Description of Site

No information on operations, length of occupancy, prior occupants or use in file.

2 nonvaulted underground tanks on site:
  1 - 12,000 gal resin tank
  1 - 10,000 gal solvent tank (mineral spirits)

Attachments: #1 Site Maps
#2 Facilities Questionnaire

B. Geology

Soils consist of interlayered sands and clays.

2 borings; deepest 35 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #3 Boring Logs

Hydrogeology

One aquifer layer defined - sand and gravel layer 13-24 ft. below ground surface. Shallowest groundwater (GW) ~8 ft. GW flow to northwest, no GW gradient or velocity information in file.

2 monitoring wells; deepest ~35 ft.

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

N/C for solvents in either soil or GW (detection limits 100 ppb for GW, 5 ppm for soil)

Facilities in vacinity: Ford Motor Co., Great Western Chemical, Pierce & Stevens, Jones Chemical.

Attachments: #4 Lab Results

D. Case Chronology

5/6/82	Facilities questionnaire received.
12/16/82	Phase I report by Harding Lawson Associates submitted. Findings: No contamination detected in soil or GW.
3/28/83	RWQCB confirms N/C status.

Attachments: #5 RWQCB letter 3/28/83

E. Current Status (as of 6/17/85)

N/C

F. References

Harding Lawson Associates Phase I report 12/82

San Jose Graphics
696 Trimble Road
San Jose, CA. 95131

Site #: NC 27
File Name: SJG

Facility: 1 Bldg
Date Reviewed: 5/85

Reviewer: MCT

A. Description of Site

No information on operations, length of occupancy, prior occupants or use in file.

3 underground solvent storage tanks are located in a dirt field southeast of the plant loading dock. The bottoms of these tanks are at approximately 12 ft. below grade. One of these tanks has never been used; the other two have contained the following chemicals:

TOL
IPA
Ethanol
Naptha solvent
XYL
Hexane
Methanol

(1)

Attachments: #1 Site Location Map
#2 Site Map
#3 Facilities Questionnaire

B. Geology

Stratigraphy of site mostly silty clay to clay with some sand lenses (1).

1 boring to a depth of 40 ft.

Soil classification per Risk Assessment Question #11.

Attachments: #4 Boring Log

Hydrogeology

One aquifer layer defined. Groundwater (GW) at ~6 ft. Only 1 Monitoring Well (MW) - regional gradient to the northwest. (1)

C. Contamination

See Risk Assessment - Chemical Properties: Questions 1,2,3,4.

For chemicals stored on site: No contamination found - detection limit 1 ppb. One GW sample analyzed for all chemicals known to have been stored in tanks. No soil analysis performed. (1)

Upgradient facility: Van Waters & Rogers
Downgradient facility: IMP

Attachments: #5 Lab Results

D. Case Chronology

Leak Detection Program 1982

12/8/82	Facilities Questionnaire completed.
7/6/83	J.H. Kleinfelder & Associates Phase I subsurface investigation completed. 1 boring/MW constructed. Findings: No GW contamination, no soil analysis performed.
8/11/83	RWQCB letter stating no further investigation necessary.

Attachments: #6 RWQCB letter 8/11/83

E. Current Status (as of 11/9/84)

N/C. No further investigation necessary.

F. References

1. J.H.Kleinfelder & Associates Phase I report 7/83

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